Revision 1

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HYDROGEOLOGIC INVESTIGATION REPORT

FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Prepared For:
Exelon Generation Company, LLC

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SEPTEMBER 2006
REF. NO. 045136 (15)

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EXECUTIVE SUMMARY

This Hydrogeologic Investigation Report (HIR) documents the results of Conestoga-Rovers & Associates' (CRA's) May to August 2006 hydrogeologic investigation pertaining to the Dresden Generating Station (Station). CRA prepared this HIR for Exelon as part of its Fleetwide Program to determine whether groundwater at and in the vicinity of its nuclear power generating facilities has been adversely impacted by any releases of radionuclides.

CRA collected and analyzed information on any historical releases, the structures, components, and areas of the Station that have the potential to release tritium or other radioactive liquids to the environment and past hydrogeologic investigations at the Station. CRA used this information, combined with its understanding of groundwater flow at the Station to identify Areas for Further Evaluation (AFEs) for the Station.

CRA collected 68 groundwater samples and six surface water samples at the Station. CRA also collected two full rounds of water levels from the newly installed (with the exception of the wells installed in August) and existing wells and measured surface water levels. All groundwater and surface water samples were analyzed for tritium, strontium-89/90, and gamma-emitting radionuclides.

The results of the hydrogeologic investigation are:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective Lower Limits of Detection (LLDs) in any of the groundwater or surface water samples obtained and analyzed during the course of this investigation;
- Strontium-90 was not detected in groundwater at concentrations greater than the United States Environmental Protection Agency drinking water standard of 8.0 pCi/L;
- Tritium was not detected at concentrations greater than the United States Environmental Protection Agency drinking water standard of 20,000 pCi/L in any of the groundwater or surface water samples obtained and analyzed during the course of this investigation;
- Tritium was detected in the shallow and intermediate groundwater zones at concentrations greater than the LLD of 200 pCi/L, which is considered background, but well below the applicable drinking water standard;
- These tritium concentrations ranged from 210 ± 124 pCi/L, to 13,200 ± 319 pCi/L;

- Strontium-90 was not detected at concentrations greater than the United States Environmental Protection Agency drinking water standard of 8.0 pCi/L in any of the groundwater or surface water samples obtained and analyzed during the course of this investigation;
- Strontium-90 was detected in a single intermediate well (MW-DN-108I) at concentrations greater than the Lower Limit of Detection of 2.0 pCi/L, which is well below the applicable drinking water standard;
- The strontium-90 concentration from MW-DN-108I was 2.17 ± 0.783 pCi/L;
- Based on the results of this investigation, tritium originating from the Station is not migrating off the Station property at detectable concentrations;
- Based on the results of this investigation, there is no current risk of exposure to radionuclides associated with licensed plant operations through any of the identified potential exposure pathways; and
- Based upon the results of this investigation, there are no known active releases into the groundwater at the Station.

Based on the information collected to date, CRA recommends that Exelon conduct periodic monitoring of selected sample locations.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this Hydrogeologic Investigation Report (HIR) for Exelon Generation Company, LLC (Exelon) as part of its Fleetwide Program to determine whether groundwater at and near its nuclear power generating facilities has been adversely impacted by any releases of radionuclides. This report documents the results of CRA's May 2006 Hydrogeologic Investigation Work Plan (Work Plan) as well as several other investigative tasks recommended by CRA during the course of the investigation. These investigations pertain to Exelon's Dresden Generating Station in Morris, Illinois (Station) (see Figure 1.1). The Station is defined as all property, structures, systems, and components owned and operated by Exelon LLC located at 6500 North Dresden Road in Morris, Illinois.

Pursuant to the Work Plan, CRA assessed groundwater quality at the Station in locations designated as Areas for Further Evaluation (AFEs). The process by which CRA identified AFEs is discussed in Section 3.0 of this report.

The objectives of the Work Plan were to:

- characterize the geologic and hydrogeologic conditions within the Station, including subsurface soil types, the presence or absence of confining layers, and the direction and rate of groundwater flow;
- characterize the groundwater/surface water interaction at the Station, including a determination of the surface water flow regime;
- evaluate groundwater quality at the Station, including the vertical and horizontal extent, quantity, concentration, and source of tritium and other radionuclides in the groundwater, if any;
- define the probable sources of any radionuclides released at the Station;
- evaluate potential human, ecological, or environmental receptors of any radionuclides that might have been released to the groundwater; and
- evaluate whether interim response activities are warranted.

2.0 STATION DESCRIPTION

The following section presents a general summary of the Station location and definition, overview of Station operations, surrounding land use, and an overview of both regional and Station-specific topography, surface water features, geology, hydrogeology, and groundwater flow conditions. This section also presents an overview of groundwater use in the area.

2.1 STATION LOCATION

The Station consists of approximately 1,600 acres, of which approximately 400 acres are used for the generating facilities. The other approximately 1,284 acres of property encompass the Industrial Cooling Pond (Pond). The Station is located near the City of Morris, in Grundy County. The Station is located at the junction of the Kankakee and Des Plaines Rivers that merge to form the Illinois River. The Station address is 6500 North Dresden Road, Morris, Illinois. The Station is owned and operated by Exelon. Figure 2.1 presents the Station Boundaries and Features map, which includes key features. The Protected Area (PA) of the Station is the fenced-in area surrounding the Reactor and Turbine Buildings and other critical facilities related to the operation of the Station.

The Pond is located to the south of the Station and serves as the Station's storage and thermal loss point for cooling water used to condense the steam generated during normal operation of the two reactors. Two man-made, unlined canals run between the power generation buildings within the PA and the Pond and are known respectively as the Hot and Cold Canals.

2.2 OVERVIEW OF COOLING WATER OPERATION

The Station's generating system consists of a three-unit nuclear generating facility, capable of generating 1,824 gross megawatts of electricity. The generating station consists of one permanently shut down reactor (Unit 1) and two operating reactors (Units 2/3). Historically, Unit 1 began commercial operation in 1960. Unit 1 was subsequently shut down in October 1978 and is being decommissioned under the Nuclear Regulatory Commission's (NRC's) SAFSTOR program. The Station Unit 1 Operating License number is DPR-2. Units 2/3 are boiling water reactors (BWRs) and began commercial operation in 1970 and 1971, respectively. The Station's Unit 2

Operating License number is DPR-19. The Station's Unit 3 Operating License number is DPR-25.

A BWR plant consists of two separate loops of fluids. Each loop is designed to avoid mixing the fluids of one loop with the fluids of another. The loops are called the primary loop and the secondary loop.

The main purpose of the primary loop is to transfer the energy generated from fission in the fuel to the turbine to produce electricity. It is a closed loop system. Nuclear fission creates heat in the fuel. This heat is removed by the flow of reactor coolant water through the reactor vessel to the turbine. Steam is generated as a result and is used to power the turbine, transferring kinetic energy to the generator to produce electricity. The steam is then condensed on one side of the condenser and the water is pumped back to the reactor vessel to be heated by the fuel again.

The main purpose of the secondary loop cooling water is to cool the other side of the condenser, cooling the primary loop steam, and transferring the heat to the environment.

Cooling water for the Station is withdrawn from the Kankakee River by way of the Units 2/3 Intake Canal. Units 2/3 were originally designed to operate in a direct open cycle. Cooling water was routed from the Kankakee River to the Units 2/3 Cribhouse, through the condensers, and discharged directly to a canal routed to the Illinois River.[1]

Just after initial startup of Units 2/3, the Pond was constructed about 2 miles south of the Station. The clay dike encloses 1,284 acres. A 'Hot Canal' was cut from the discharge of Units 2/3 to the Pond Lift Station. Cooling water is lifted 22 feet and routes around the Pond back to weir gates or a Spillway, constructed just south of the Lift Station. The Return Canal ('Cold Canal') routes parallel to the Hot Canal back to the plant. The Cold Canal ends at a Flow Regulating Station with large gates that can divert the cooling water back to the plant (Closed Cycle operation) or discharge it to the Illinois River (Indirect Open Cycle). The Pond and both Hot and Cold Canals reduce thermal impact from dual unit operation.

The cooling water passes through the Units 2/3 Cribhouse and into the condensers. Once it passes through the condensers it exits the Turbine Building and is discharged to the Hot Canal and routes to the Pond. Cooling water is routed through the Pond in such

[1] The Kankakee River is where the Intake point is located, whereas, the Illinois River is where the Discharge point is located (see Figure 2.1).

a way as to maximize the heat loss. After passing through the Pond, the cooling water is routed back to the Station via the Cold Canal. During the hotter summer months, the cooling water, from either the Hot or Cold Canals, also passes through a series of cooling towers. This allows the Station to increase its efficiency in the summer months. It enables the Station to comply with the thermal limits of its National Pollutant Discharge Elimination System (NPDES) Permit IL0002224. Due to the Station's differing demand for cooling water throughout the day, the water levels in the canals fluctuate markedly on a daily basis. There are two cooling cycles employed at the Station as discussed below.

From October 1 through June 14 of each year, the Station operates in a Closed Cycle mode during which a majority of the cooling water is recirculated, and discharge to the Illinois River is limited. In this mode, the Flow Regulating Gates divert cooling water from the Pond back to the Cribhouse Intake structure. In the Closed Cycle mode, 50,000 gallons per minute (gpm) are discharged (blowdown) to the Illinois River through a permitted outfall.

From June 15 through September 30 of each year, the Dresden NPDES Permit allows the Station to operate in the Indirect Open Cycle mode. In this mode, the Flow Regulating Gates divert all the cooling water flow to the Illinois River through a permitted outfall.

Figure 2.2 provides an overview of the Station's cooling water cycles.

2.3 SURROUNDING LAND USE

Land surrounding the Station is primarily used for residential, agricultural, and limited industrial purposes. The Illinois River lies to the north of the Station, with residences located on the northern banks of a bluff on the river, overlooking the Station. To the east of the Station is the Kankakee River. Residential lots are located immediately south of the Station along the banks of the Kankakee River. To the west of the Station is vacant land owned by Exelon, with a General Electric Fuel Processing Facility further beyond. To the southwest of the Station is Goose Lake Prairie State Park, which is owned and operated by the Illinois Department of Natural Resources (Illinois DNR). The nearest urbanized area is the town of Channahon, which is approximately 3 miles to the northeast of the Station, across the Illinois River. Agricultural land is located further south and west of the Station.

2.4 STATION SETTING

The following section presents a general summary of the topography, surface water features, geology, hydrogeology, and groundwater flow conditions near the Station. The information was primarily gathered from the Dresden Station Updated Final Safety Analysis Report (UFSAR), Revision 6, dated June 2005, and the Final Environmental Statement (FES), dated November 1973. The main references the UFSAR relies upon are listed in Section 10.0 of this HIR. CRA checked and verified all UFSAR references that apply to this HIR.

2.4.1 TOPOGRAPHY AND SURFACE WATER FEATURES

The Station is located within the Kankakee River Basin adjacent to the confluence of the Kankakee River and Des Plaines River forming the Illinois River (Willman and Frye, 1969; Frye et al., 1969). In general, the topography of the area slopes downward toward the Kankakee and Illinois Rivers (see Figure 1.1 and United States Geological Topographic Quadrangle Map—Dresden Mosaic, Illinois dated 1994).

Figure 2.1 presents portions of some of the relevant surface water features at the Station such as the Pond, and Hot and Cold Canals. The topography at the Station is generally flat, with a gentle slope down to the Kankakee and Illinois Rivers. Any surface water flows via storm drains and man-made ditches.

There are four rock (rip-rap) lined storm drain basins at the Station that originate in the vicinity of the Units 2/3 Reactor Building. For the purposes of this report, the storm drain basins are the East Drainage Basin, West Drainage Basin, Southwest Drainage Basin, and Southeast Drainage Basin.

The East Drainage Basin drains the area around the southeastern and northeastern perimeter of the Turbine Building, and a portion of the Station area located between Unit 1 and the Kankakee River. The East Drainage Basin discharges to the Unit 1 Intake Canal.

The West Drainage Basin drains the area around the western perimeter of the Turbine Building, as well as the area to the northwest. The West Drainage Basin discharges to the Units 2/3 Discharge Canal through a point located in the west side of the canal.

The Southwest Drainage Basin is located further to the south and west of the Turbine Building and drains storm water via a drainage ditch located on the south edge of the

PA. The Southwest Drainage Basin, during times of heavy rainfall, discharges to the Hot Canal.

The Southeast Drainage Basin is located further to the south and east of the Turbine Building and drains storm water via a drainage ditch located on the southeast edge of the PA. The Southeast Drainage Basin, during times of heavy rainfall, discharges to the Kankakee River (RETEC, 2005).

The primary surface water features within the area of the Station include the Illinois River to the north, the Des Plaines River to the east, and the Kankakee River to the southeast. The Station is located to the south of the intersection of the Kankakee and Des Plaines River that converge to form the Illinois River. Man-made surface water features include two Intake Canals (Unit 1 and Units 2/3) leading from the Kankakee River, two Discharge Canals (Unit 1 and Units 2/3) leading to the Illinois River, the Pond, and two canals leading to and from the Pond known as the Hot and Cold Canals, respectively. There are also small lakes and wetlands to the south and southwest of the Station.

2.4.2 GEOLOGY

Figure 2.3 presents a stratigraphic section of the Station area geology. The geology near the Station is comprised of these stratigraphic units:

- Overburden and Fill Material;
- Pottsville Sandstone;
- Divine Limestone;
- Maquoketa Shale; and
- Galena Dolomite.

Regionally, the overburden typically consists of a Quaternary Age sand and gravel unit and a glacial till unit with some lenses of coarse-grained glacial drift (Frye, 1969; RETEC, 2005). However, in locations bordering major rivers, overburden deposits of alluvial origin exhibiting variable composition and thickness are expected to be predominant. At the Station, overburden deposits are of limited areal extent and consist of highly organic dark brown to black sandy clay with some gravel (RETEC, 2005). Where present at the Station, the thickness of these deposits is typically less than 5 feet. Fill material, consisting of gravel and sand, is present to depths of up to 30 feet below ground surface (bgs) in certain areas within the PA due to construction of the Station.

At the Station, the overburden deposits, where present, are underlain by the Pennsylvanian-aged Pottsville Sandstone. The Pottsville Sandstone is exposed at ground surface in areas where overburden deposits are absent. Regionally, the Pottsville Sandstone exhibits prominent cross bedding, which was observed in the outcrops along the Hot and Cold Canals at the Station (Harza, 1991, 1995; RETEC, 2005). The sandstone is absent north of the Station, and in areas to the west and southeast of the Station according to residential and State well logs. The thickness of the sandstone, where present, near the Station ranges from 25 to 30 feet.

The Ordovician-aged Divine Limestone unconformably underlies the Pennsylvanian-aged Pottsville Sandstone beneath the Station (i.e., intermediary Silurian- and Devonian-aged units are absent) (Harza, 1991, 1995). Regionally, the Divine Limestone is considered part of the Maquoketa Shale Group and has a regional dip to the southeast of approximately 25 feet per mile (Willman, 1975; Harza, 1991, 1995). The Divine Limestone is widely distributed throughout Illinois; however, in some areas it becomes interbedded with shale and can be inseparable from the shales below (Willman, 1975). This is depicted in many of the intermediate well boring logs (Appendix A) at approximately 35 to 40 feet bgs, where a transitional limestone/shale layer was noted. The thickness of the Divine Limestone varies from 25 to 30 feet thick across the Station (Harza, 1991, 1995).

The Ordovician-aged Maquoketa Shale is also part of the Maquoketa Shale Group and consists of dark gray to dark green dolomitic shale (Willman, 1975). The regional thickness of the Maquoketa Shale consistently ranges between 65 and 70 feet; however, the elevation of the shale surface varies significantly. Based on the three deep wells installed by RETEC in March 2005 (DSP-157D, DSP-158D, and DSP-159D), the thickness of the shale at the Station ranged from 64 to 68 feet. Similar to the Divine Limestone, the Maquoketa Shale has a regional dip to the southeast of approximately 25 feet per mile (Willman, 1975; Harza, 1991, 1995).

Beneath the Maquoketa Shale Group lies the Ordovician-aged Galena Dolomite. Regionally, the Galena Dolomite consists of limestone and dolomite formations (Willman, 1975; Burch, 2002; Buschbach, 1964). At the Station, according to RETEC logs (Appendix A), this unit consists of a light-brownish gray to pinkish-white crystalline dolomite.

2.4.3 HYDROGEOLOGY

The hydrogeologic units underlying the Station include the:

- Water table aquifer consisting of the Pottsville Sandstone and Divine Limestone; and
- Deep Aquifer consisting of the Galena Dolomite.

The water table is the uppermost groundwater aquifer. Groundwater in the water table aquifer occurs under unconfined conditions under the Station, and is found within the Pottsville Sandstone and Divine Limestone. The upper flow zone of the water table is defined in the Pottsville Sandstone and the lower flow zone of the water table is defined in the Divine Limestone. The depth to groundwater varies across the Station, ranging from approximately 3 feet bgs to 16 feet bgs (Harza, 1991, 1995; RETEC, 2005). The water table aquifer is monitored by shallow monitoring wells screened within the upper portion of the water table aquifer in the sandstone (20 to 25 feet deep), and intermediate wells (35 and 50 feet deep) screened within the water table aquifer in the limestone.

The Maquoketa Shale is the lower confining unit to the water table aquifer and hydraulically separates the water table aquifer from the lower aquifers at the Station (Harza, 1991, 1995). Regional hydrogeologic reports indicate that vertical migration downward from the water table aquifer is impeded where the Maquoketa Shale is present due to its low permeability acting as an aquitard (Harza, 1991, 1995; RETEC, 2005).

Beneath the impermeable Maquoteka Shale, the Galena Dolomite is the next water-bearing unit and is considered the Deep Aquifer at the Station. The upper portion of the Galena Dolomite is unsaturated as indicated by the apparent dry conditions in the deep wells (RETEC, 2005).

2.5 AREA GROUNDWATER USE

CRA conducted an area wide well inventory of all private, institutional, and public wells within approximately 2 miles of the Station and a total of 109 wells were identified (Appendix B). There are 13 domestic (private) wells, one institutional well, four unknown usage wells, and one well owned by the Station that obtain their water from the deeper (i.e., well depth of 600 feet or greater) bedrock aquifers (see Figure B.1). CRA was unable to confirm all well locations using the Illinois State Geologic Survey's online well database. Regional water supplies at towns to the west and northeast obtain their water supplies from deep aquifers at depths over 600 feet below the Maquoketa Shale.

This shale aquitard prevents water from migrating vertically downward to the production wells.

The groundwater beneath the Station is used for potable purposes. The Station obtains water from one 1,500-foot deep well and one 788-foot deep well completed in the deep bedrock below the Maquoketa Shale. The groundwater withdrawn from these wells is stored in a 100,000-gallon domestic water tank, and is used for potable purposes and to produce demineralized water.

3.0 AREAS FOR FURTHER EVALUATION

CRA considered all Station operations in assessing groundwater quality at the Station. During this process, CRA identified areas at the Station that warranted further evaluation or "AFEs". This section discusses the process by which AFEs were selected.

CRA's identification of AFEs involved the following components:

- Station inspection on March 22 and 23, 2006;
- interviews with Station personnel;
- evaluation of Station systems;
- investigation of confirmed and unconfirmed releases of radionuclides; and
- review of previous Station investigations.

CRA analyzed the information collected from these components combined with information obtained from CRA's study of hydrogeologic conditions at the Station to identify those areas where groundwater potentially could be impacted from operations at the Station.

CRA then designed an investigation to determine whether any confirmed or potential releases or any other release of radionuclides adversely affected groundwater. This entailed evaluating whether existing Station groundwater monitoring systems were sufficient to assess the groundwater quality at the AFEs. If the systems were not sufficient to adequately investigate groundwater quality associated with any AFE, additional monitoring wells were installed by CRA.

The following sections describe the above considerations and the identification of AFEs. The results of CRA's investigation are discussed in Section 5.0.

3.1 SYSTEMS EVALUATIONS

Exelon launched an initiative to systematically assess the structures, systems and components that store, use, or convey potentially radioactively contaminated liquids. Maps depicting each of these systems were developed and provided to CRA for review. The locations of these systems are presented on Figure 3.1. The Station identified a total of 18 systems that contain or could contain potentially radioactively contaminated liquids. The following presents a list of these systems.

System Identification	*Description*
Unit 1	
13	Emergency Condenser
19	Fuel Pool Cooling
20	Radwaste
33	Condensate
39	Service Water
54	Off Gas
57	Heating Steam
Units 2/3	
13	Isolation Condenser
19	Fuel Pool Cooling
20	Radwaste
23	High Pressure Coolant Injection (HPCI) System
33	Condensate
44	Circulating Water
48	Reactor Building Equipment Drains Sumps
49	Turbine Building Equipment Drains Sumps
54	Off Gas
57	Heating Steam
89	High Radiation Sampling System

After these systems were identified, Exelon developed a list of the various structures, components and areas of the systems (e.g., piping, tanks, process equipment) that handle or could potentially handle any radioactively contaminated liquid. The structures, components, and areas may include:

- aboveground storage tanks;
- condensate vents;
- areas where confirmed or potential historical releases, spills, or accidental discharges may have occurred;
- pipes;
- pools;
- sumps;
- surface water bodies (i.e., basins, pits, ponds, or lagoons);
- trenches;
- underground storage tanks; and
- vaults.

The Station then individually evaluated the various system components to determine the potential for any release of radioactively contaminated liquid to enter the environment. Each structure or identified component was evaluated against the following seven primary criteria:

- location of the component (i.e., basement or second floor of building);
- component construction material (i.e., stainless steel or steel tanks);
- construction methodologies (i.e., welded or mechanical pipe joints);
- concentration of radioactively contaminated liquid stored or conveyed;
- amount of radioactively contaminated liquid stored or conveyed;
- existing controls (i.e., containment and detection); and
- maintenance history.

System components, which were located inside a building or that otherwise had some form of secondary containment, such that a release of radioactively contaminated liquid would not be discharged directly to the environment, were eliminated from further evaluation. System components that are not located within buildings or did not have some other form of secondary containment were retained for further qualitative evaluation of the risk of a release of radioactively contaminated liquid to the environment and potential magnitude of any release.

Exelon's risk evaluation took into consideration factors such as:

- the potential concentration of radionuclides;
- the volume of liquid stored or managed;
- the probabilities of the systems actually containing radioactively contaminated liquid; and
- the potential for a release of radioactively contaminated liquid from the system component.

These factors were then used to rank the systems and system components according to the risk for a potential release of a radioactively contaminated liquid to the environment. The evaluation process resulted in the identification of structures, components, and areas to be considered for further evaluation.

3.2 HISTORICAL RELEASES

CRA also reviewed information concerning confirmed or potential historical releases of radionuclides at the Station, including reports and documentation previously prepared by Exelon and compiled for CRA's review. CRA evaluated this information in identifying AFEs. Any historical releases identified during the course of this assessment, which may have a current impact on Station conditions, are further discussed in Section 3.4.

3.3 STATION INVESTIGATIONS

CRA considered previous Station investigations in the process of selecting the AFEs for the Station. This section presents a summary of the Station's Radiological Environmental Monitoring Program (REMP) and past Station investigations.

3.3.1 POWER PLANT DOCUMENTS-UFSAR REPORT

During the construction of the Station, a series of comprehensive investigations of regional and local geology, surface water, and groundwater conditions were conducted. These studies were performed for a number of purposes including geotechnical evaluations of the underlying bedrock, engineering designs for the Station around the Pond, present and future sources of groundwater, present and future groundwater use, and other engineering and environmental purposes. These studies are documented in the UFSAR and FES for the Station.

3.3.2 RETEC GROUNDWATER INVESTIGATION STUDY

In response to tritium detected in July 2004 groundwater samples collected by the Station, RETEC was contracted to characterize the nature of groundwater flow at the facility and to evaluate the extent of the tritium. RETEC reviewed historical data, installed additional monitoring wells, conducted geophysical logging, completed two rounds of water level measurements, performed slug tests, and sampled groundwater for tritium.

RETEC's groundwater investigation report (dated December 7, 2005) concluded that elevated tritium concentrations were detected in groundwater samples from wells located near the Condensate Storage Tank (CST) System, the Unit 1 Spent Fuel Pool,

Unit 1 Reactor Building, and the Radwaste discharge piping location for Units 2/3. RETEC's investigation revealed that the bulk of the tritium discharged to the groundwater from the CST system and flowed toward the east and northwest under the influence of the local hydraulic gradient. The tritium plume was not likely to move in a southeasterly direction, toward residential wells. On November 30, 2005, Exelon submitted this report to Illinois EPA.

3.3.3 GROUNDWATER MONITORING PROGRAM

The Station has a monitoring program that has identified approximately 54 sampling locations (storm drain system catchbasins, groundwater monitoring wells, and surface water sampling locations), some of which are sampled as often as every day.

3.3.4 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

The REMP at the Station was initiated in 1966. The REMP includes the collection of multi-media samples including air, surface water, groundwater, fish, sediment, vegetation, local cow milk, and residential potable water. The samples are analyzed for beta and gamma-emitting radionuclides, tritium, iodine-131, and/or strontium as established in the procedures developed for the REMP. The samples are collected at established locations, identified as stations, so that trends in the data can be monitored.

Surface water samples and groundwater samples are collected, as part of REMP at a total of five locations. Surface water samples are collected at two locations upstream of the Station on the Kankakee (D-54) and Des Plaines (D-52) Rivers, and at one location downstream of the Station on the Illinois River (D-51). Groundwater samples are collected from a residential well "RW-1" (D-23), and at the Dresden Island Lock and Dam well (D-35).

In 2005, surface water tritium concentrations in the Kankakee River ranged from the Lower Limit of Detection (LLD) of 200 pCi/L to 720 pCi/L and are considered an upstream source.

An annual report is prepared providing a description of the activities performed and the results of the analysis of the samples collected from the various media. The latest report generated was prepared by Station personnel and is entitled "Dresden Nuclear Power Station Units 1, 2, and 3 Annual Radiological Environmental Operating Report, 1 January through 31 December 2005". This report concluded that the operation of the

Station had no adverse radiological impact on the environment. The annual report is submitted to the NRC.

3.4 IDENTIFIED AREAS FOR FURTHER EVALUATION

CRA used the information contained herein along with its understanding of the hydrogeology at the Station to identify AFEs, which were a primary consideration in the development of the scope of work in the Work Plan. The establishment of AFEs is a standard planning practice in hydrogeologic investigations to focus the investigation activities at areas where there is the greatest potential for impact to groundwater.

Specifically, AFEs were identified based on these six considerations:

- systems evaluations;
- risk evaluations;
- review of confirmed and/or potential releases;
- review of documents;
- review of the hydrogeologic conditions; and
- Station inspection completed on March 22 and 23, 2006.

Prior to CRA completing its analysis and determination of AFEs, Station personnel completed an exhaustive review of all historic and current management of systems that may contain potentially radioactively contaminated liquids.

CRA reviewed the systems identified by the Station, which have the potential for the release of radioactively contaminated liquids to the environment, and groundwater flow at the Station. This evaluation allowed CRA to become familiar with Station operations and potential systems that may impact groundwater. CRA then evaluated information concerning historic releases as provided by the Station. This information, along with a review of the results from historic investigations, was used to refine CRA's understanding of areas likely to have the highest possibility of impacting groundwater. Where at-risk systems or identified historical releases were located in close proximity or were located in areas, which could not be evaluated separately, the systems and historical releases were combined into a single AFE. At times, during the Station investigation, separate AFEs were combined into one or were otherwise altered based on additional information and consideration.

Finally, CRA used its understanding of known hydrogeologic conditions (prior to this investigation) to identify AFEs. Groundwater flow was an important factor in deciding whether to combine systems or historical releases into a single AFE or create separate AFEs. For example, groundwater flow beneath several systems that contain radioactively contaminated liquid that flows toward a common discharge point were likely combined into a single AFE.

Based upon its review of information concerning confirmed or potential historical releases, historic investigations, and the systems at the Station that have the potential for release of radioactively contaminated liquids to the environment combined with its understanding of groundwater flow at the Station, CRA has identified the following as the only AFEs (see Figure 3.1).

AFE-Dresden-1: CST System HPCI Piping for Units 2/3

This AFE was established based on information regarding historical releases of tritiated water in this area. In 1994 there was a leak from the HPCI return piping to the CST. The piping was isolated and repaired. Shallow groundwater monitoring wells were installed at that time. In August of 2004, the wells outside the Units 2/3 Reactor Building identified elevated tritium concentrations resulting from a leak in the HPCI suction piping. The piping was isolated and repaired. In January 2006, the Station personnel identified higher than expected concentrations of tritium in this area as part of its groundwater monitoring program. The HPCI piping in this area was suspect and isolated. The HPCI piping replacement is currently in progress.

AFE-Dresden-2: Unit 1 Spent Fuel Pool

This AFE was established based on information regarding the historical releases in this area consisting of a spent fuel pool overflow. Specifically, in 1989, radioactively contaminated water overflowed from the Unit 1 Fuel Pool. Available data showed soil was removed from the area.

AFE-Dresden-3: Radwaste Discharge Lines for Units 2/3

This AFE was established based on information regarding historical releases in this area, including those in 1984 and 1986. In October 1984 and July 1986 leaks occurred in the Units 2/3 Radwaste discharge piping. Most notably, in November 1999, a leak occurred on Units 2/3 Radwaste River Discharge Canal pipe. The piping was excavated and subsequently replaced.

AFE-Dresden-4: Piping from CST System and Storm Drain to Unit 1 Intake Canal

This AFE was established based on information regarding a historical release in this area due to a leak in an underground contaminated demineralized water (CDW) pipe. The water flowed into a storm drain that led to the Unit 1 Intake Canal.

4.0 FIELD METHODS

The field investigations completed for this HIR were completed in May and June 2006. Supplemental field activities were completed in July and August 2006. CRA supervised the installation of monitoring wells, collected samples from the newly-installed and existing monitoring wells, and collected samples from surface water locations. The field investigations were completed in accordance with the methodologies presented in the Work Plan (CRA, 2006).

4.1 SURFACE WATER ELEVATION MONITORING POINTS

Water levels in surface water bodies were measured from four surface water elevation monitoring points (SW-DN-101, SW-DN-102, SW-DN-103, and SW-DN-106) in June 2006 using a portable water level meter from fixed locations on bridges. During the August 2006 supplemental field activities, surface water elevations were measured from seven surface water elevation monitoring points (SW-DN-101, -102, -103, -104, -105, -106, and -107). The surface water elevation monitoring points are presented on Figure 4.1. Staff gauges were not installed at the Station due to safety concerns. Surface water elevations at locations SW-DN-104, -105, and –107 were not collected in May 2006 due to safety concerns at that time.

4.2 GROUNDWATER MONITORING WELL INSTALLATION

Sixteen new monitoring wells were installed for the fleetwide hydrogeologic investigation in May 2006. An additional 21 new monitoring wells were installed in July 2006 for the fleetwide hydrogeologic investigation. The additional wells were installed to further characterize the groundwater flow system and to determine the impact of surface water in the canals on groundwater flow directions. Monitoring well construction logs are provided in Appendix A. Figure 4.2 presents the locations of the 37 new monitoring wells and the existing monitoring wells at the Station. These locations were selected based on a review of all data provided, the hydrogeology at the Station, the existing well locations, and current understanding of identified AFEs. Table 4.1 summarizes the well completion details. The shallow boreholes were advanced into the bedrock from approximately 20 feet bgs to 42 feet bgs based upon the depth of the Pottsville Sandstone Formation, with the exception of locations MW-DN-102S (15 feet bgs) and MW-DN-107S (15 feet bgs). MW-DN-102S could not be advanced beyond 15 feet bgs due to complications with drilling and MW-DN-107S was only set on top of the bedrock and screened within the fill material at the Station. The

intermediate boreholes were advanced into the bedrock from approximately 50 feet bgs to 61 feet bgs depending upon the depth to the Maquoketa Shale Formation.

Prior to completing any ground penetration activities, CRA completed subsurface utility clearance procedures to minimize the potential of injury to workers and/or damage to subsurface utility structures. The subsurface clearance procedures consisted of completing an electronic survey within a minimum of 10-foot radius of the proposed location utilizing electromagnetic and ground penetrating radar technology. Additionally, an air knife was utilized to verify utilities were not present at the proposed location to a depth to 10 feet bgs.

Specific installation protocols for the shallow and intermediate monitoring wells are described below:

- the borehole was advanced to the target depth by an air rotary drill equipped with a 6-inch outer diameter drill bit;
- a nominal 2-inch diameter (No. 10 slot) PVC screen, 10 feet in length, attached to a sufficient length of 2-inch diameter schedule 40 PVC riser pipe to extend to the surface, was placed into the borehole through the augers;
- a filter sand pack consisting of silica sand was installed to a minimum height of 2 feet above the top of the screen as the augers were removed;
- a minimum 2-foot thick seal consisting of 3/8-inch diameter bentonite pellets or chips was placed on top of the sand pack and hydrated using potable water;
- the remaining borehole annulus was sealed to within 3 feet of the surface using pure bentonite chips; and
- the remaining portion of the annulus was filled with concrete and a 6-inch diameter protective above-grade casing. The wellhead was fitted with a watertight, lockable cap.

4.3 GROUNDWATER MONITORING WELL DEVELOPMENT

In order to establish good hydraulic communication with the aquifer and reduce the volume of sediment in the newly installed monitoring wells, monitoring well development was conducted in accordance with the procedure outlined below:

- monitoring wells were surged using a pre-cleaned surge block or bailer for a period of at least 10 minutes;

- water was purged from the monitoring well using an electric submersible or peristaltic pump;
- groundwater was collected at regular intervals and the pH, temperature, and conductivity were measured using field instruments. These instruments were calibrated daily according to the manufacturer's specifications. Additionally, observations such as color, odor, and turbidity of the purged water were recorded; and
- development continued until the turbidity and silt content of the monitoring wells were significantly reduced and three consistent readings of pH, temperature, and conductivity were recorded, or a maximum of ten well volumes were purged.

Thirty-six of 37 newly installed monitoring wells were developed in accordance with this monitoring well development procedure. Monitoring well MW-DN-123S was dry upon installation and was therefore not developed.

A summary of monitoring well development parameters is provided in Table 4.2.

4.4 SURVEY

The new monitoring wells and surface water sampling locations were surveyed to establish reference elevations relative to mean sea level. The top of each well casing was surveyed to the nearest 0.01 foot relative to the North American Vertical Datum, 1988 (NAVD 88), and the survey point was marked on the well casing. The survey included the ground elevation at each well to the nearest 0.10 foot relative to the NAVD 88, and the well location to the nearest 1.0 foot. A reference point was also marked on the bridge surface or railing.

4.5 GROUNDWATER AND SURFACE WATER ELEVATION MEASUREMENTS

On May 22, 2006 and again on August 7, 2006, CRA collected a round of water level measurements from the monitoring wells and surface water elevation monitoring points at the Station in accordance with the Work Plan. Based on the measured depth to water from the reference point and the surveyed elevation of the reference point, the groundwater or surface water elevation was calculated. A summary of groundwater elevations for the event is provided in Table 4.3. A summary of surface water elevations for the event is provided in Table 4.4.

Prior to the water level measurements, the wells were identified and located. Once the wells were identified, CRA completed a thorough inspection of each well and noted any deficiencies. Water level measurements were collected using an electronic depth-to-water probe accurate to ± 0.01 foot. The measurements were made from the designated location on the inner riser or steel casing of each monitoring well, and on the reference point for each surface water elevation monitoring point. The water level measurements were obtained using the following procedures:

- the proper elevation of the meter was checked by inserting the tip into water and noting if the contact was registering correctly;
- the tip was dried, and then slowly lowered into the well until contact with the water was indicated;
- the tip was slowly raised until the light and/or buzzer just began to activate. This indicated the static water level;
- the reading at the reference point was noted to the nearest hundredth of a foot;
- the reading was then re-checked; and
- the water level was then recorded, and the water level meter decontaminated prior to use at the next well location.

4.6 GROUNDWATER AND SURFACE WATER SAMPLE COLLECTION

CRA conducted one round of groundwater sampling during the completion of the Work Plan for these hydrogeologic investigations. A total of 45 monitoring wells were sampled between May 23 and June 2, 2006. Of the 45 monitoring wells sampled, 16 were newly installed. In addition, between August 7, 2006 to August 14, 2006, CRA conducted a supplemental round of groundwater sampling of 21 newly installed wells (installed in July 2006) and one previously installed groundwater well. The sampling for each event was scheduled to allow for 2 weeks to elapse between well development and groundwater sample collection. The existing wells were selected for inclusion in this investigation based on their proximity to AFEs.

At the monitoring well locations, CRA conducted the sampling using pneumatic bladder pumps or peristaltic pumps and dedicated polyethylene tubing to employ low flow purging techniques as described in Puls and Barcelona (1996).

The groundwater in the monitoring wells was sampled by the following low-flow procedures:

- the wells were located and the well identification numbers were verified;
- a water level measurement was taken;
- the well was sounded by carefully lowering the water level tape to the bottom of the well (so as to minimize penetration and disturbance of the well bottom sediment), and comparing the sounded depth to the installed depth to assess the presence of any excess sediment or drill cuttings;
- the pump or tubing was lowered slowly into the well and fixed into place such that the Intake was located at the mid-point of the well screen, or a minimum of 2 feet above the well bottom/sediment level;
- the purging was conducted using a pumping rate between 100 to 500 milliliters per minute. Initial purging began using the lower end of this range. The groundwater level was monitored to ensure that a drawdown of less than 0.3 foot occurred. If this criterion was met, the pumping rate was increased dependent on the behavior of the well. During purging, the pumping rate and groundwater level were measured and recorded approximately every 10 minutes;
- the field parameters [pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity] were monitored during the purging to evaluate the stabilization of the purged groundwater. Stabilization was considered to be achieved when three consecutive readings for each parameter, taken at 5-minute intervals, were within the following limits:

pH	± 0.1 pH units of the average value of the three readings,
Temperature	± 3 percent of the average value of the three readings,
Conductivity	± 0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and ± 0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm,
ORP	± 10 millivolts (mV) of the average value of the three readings,
DO	± 10 percent of the average value of the three readings, and
Turbidity	± 10 percent of the average value of the three readings, or a final value of less than 5 nephelometric turbidity units (NTUs);

- once purging was complete, the groundwater samples were collected directly from the pump/tubing directly into the sample containers; and

- in the event that the groundwater recharge to the monitoring well was insufficient to conduct the low-flow procedure, the well was pumped dry and allowed to sufficiently recharge prior to sampling.

All groundwater samples were labeled with a unique sample number, the date and time, the parameters to be analyzed, the job number, and the sampler's initials. For the May and June 2006 sampling event, the samples were screened by the Station for shipment to Teledyne Brown Engineering Inc. (Teledyne Brown). For the August 2006 sampling event, groundwater samples were shipped to Teledyne Brown based on screening results obtained during well development activities.

Due to the limited volume of water available for collection in monitoring well MW-DN-123S, the monitoring well was not purged and a bailer was used to collect a groundwater sample for tritium only (insufficient volume of groundwater remained to sample for strontium-89/90 or gamma-emitting radionuclides).

Field measurements for the hydrogeologic investigation are presented in Table 4.5 and a sample key is provided in Table 4.6.

CRA containerized the water purged from the monitoring wells during the sampling, as well as the water purged from all of the wells during the hydrogeologic investigation. The water was placed into 55-gallon drums, which will be processed by the Station in accordance with its NPDES permit.

Surface water samples were collected from May 23 to June 2, 2006 at the Units 2/3 Intake Canal (SW-DN-101), Units 2/3 Discharge Canal (SW-DN-102), Recycling Canal (SW-DN-103), Hot Canal (SW-DN-104), Cold Canal (SW-DN-105) and the Pond (SW-DN-106). The surface water sampling locations are presented on Figure 4.1.

The surface water samples were collected by directly filling the sample container from the composite samplers at the determined locations until completely filled. A sample key is presented in Table 4.6.

4.7 DATA QUALITY OBJECTIVES

CRA has validated the analytical data to establish the accuracy and completeness of the data reported. Teledyne Brown provided the analytical services. The Quality Assurance Program for the laboratory is described in Appendix C. Analytical data for groundwater and surface water samples collected in accordance with the Work Plan are

presented in Appendix D. Data validation reports are presented in Appendix E. The data validation included the following information and evaluations:

- sample preservation;
- sample holding times;
- laboratory method blanks;
- laboratory control samples;
- laboratory duplicates;
- verification of laboratory qualifiers; and
- field quality control (field blanks and duplicates).

Following the completion of field activities, CRA compiled and reviewed the geologic, hydrogeologic, and analytical data.

The data were reviewed using the following techniques:

- data tables and databox figures;
- hydrogeologic cross-sections; and
- hydraulic analyses.

4.8 SAMPLE IDENTIFICATION

Systematic sample identification codes were used to uniquely identify all samples. The identification code format used in the field was: WG - DN – DSP-152 - 052306 – JH - 001. A summary of sample identification numbers is presented in Table 4.6.

WG	-	Sample matrix -groundwater
WS	-	Sample matrix - surface water
RB	-	Sample matrix – rinse blank
DN	-	Station code
DSP-152	-	Well location
052306	-	Date
JH	-	Sampler initial
001	-	Sample number

4.9 CHAIN-OF-CUSTODY RECORD

The samples were delivered to Station personnel under chain-of-custody protocol. Subsequently, the Station shipped the samples under chain-of-custody protocol to Teledyne Brown for analyses.

4.10 QUALITY CONTROL SAMPLES

Quality control samples were collected to evaluate the sampling and analysis process.

Field Duplicates

Field duplicates were collected to verify the accuracy of the analytical laboratory by providing two samples collected at the same location and then comparing the analytical results for consistency. Field duplicate samples were collected at a frequency of one duplicate for every ten samples collected. A total of four duplicate samples were collected. The locations of duplicate samples were selected in the field during the performance of sample collection activities. The duplicate samples were collected simultaneously with the actual sample and were analyzed for the same parameters as the actual samples.

Split Samples

During the May/June 2006 sampling event, split samples were collected for the NRC for tritium simultaneously with the actual sample at every sample location. Split samples were delivered to the Station personnel and made available to the NRC and Illinois Environmental Protection Agency (EPA).

During the August 2006 sampling event, split samples were collected for the NRC and for the Illinois Emergency Management Agency (IEMA) for tritium simultaneously with the actual sample at every sample location. Split samples were delivered to the Station personnel and made available to the NRC, IEMA, and Illinois EPA.

4.11 ANALYSES

Groundwater and surface water samples were analyzed for tritium and gamma-emitting radionuclides as listed in NUREG-1302 and strontium-89/90 as listed in 40 CFR 141.25.

5.0 RESULTS SUMMARY

This section provides a summary of Station-specific geology and hydrogeology, along with a discussion of hydraulic gradients, groundwater elevations, and flow directions in the vicinity of the Station. This section also presents and evaluates the analytical results obtained from activities performed in accordance with the Work Plan.

5.1 STATION GEOLOGY

The geology encountered during the monitoring well installation activities is consistent with the geology described in Section 2.4.2 and the geology described by RETEC (RETEC, 2005). The geology beneath the Station consists of a relatively thin overburden deposit that overlies layers of sandstone, limestone, shale, and dolomite. Geologic cross-section locations are shown on Figure 5.1 and the geologic lines of sections are shown on Figures 5.2 and 5.3, respectively. Geological units at the Station consist of the following:

- Thin layer of overburden and fill;
- Pottsville Sandstone Formation;
- Divine Limestone Formation;
- Maquoketa Shale; and
- Galena Dolomite Formation.

Where present, the overburden ranges between 0 and 5 feet thick at the Station and consists of highly organic dark brown to black sandy clay with some gravel. During construction of the Station, fill consisting of gravel and sand was used to replace the overburden within the PA. At monitoring well MW-DN-108I, fill was encountered to a depth of approximately 26 feet bgs. According to Station personnel, MW-DN-108I was drilled over the abandoned intake trough for the Unit 1 cooling water from the Unit 1 Cribhouse. There is approximately 12 feet of fill along the east bank of the Hot Canal near well cluster DSP-159; the fill was placed several years ago during construction. Monitoring well MW-DN-107S was also installed in the fill in the PA.

The Pottsville Sandstone Formation is a hard, gray to yellowish-brown, medium- to coarse-grained sandstone. The Pottsville Sandstone Formation is prevalent beneath the entire area of the Station as shown on Figures 5.2 and 5.3. The thickness of the sandstone near the Station ranges from 25 to 30 feet. Monitoring wells MW-DN-101S to -106S, -109S to –116S, and –118S to –123S are all screened within the Pottsville Sandstone

Formation. According to RETEC, the Pottsville Sandstone Formation was not encountered during drilling activities to the south of the Station at well clusters DSP-158 or DSP-159.

The Divine Limestone Formation is below the Pottsville Sandstone Formation and is a hard, light-gray crystalline limestone. A transitional zone was noted between the Divine Limestone and the underlying Maquoketa Shale at approximately 40 to 55 feet bgs where the Divine Limestone Formation had interbedded layers of shale and traces of chert present. The thickness of the Divine Limestone Formation across the Station is approximately 15 to 30 feet. Monitoring wells MW-DN-101I, -102I, -103I, -108I to -117I, and -119I to –123I are all screened within the Divine Limestone Formation.

The Maquoketa Shale is below the Divine Limestone Formation and is a hard, pale-green to gray shale with some locations having trace amounts of sandstone and limestone. The Maquoketa Shale acts as a confining layer and aquitard at the Station, separating the water table aquifer from the Deep Aquifer below. To identify the bottom of the water table aquifer, the boring was advanced approximately 2 feet into the top of the Maquoketa Shale during installation of intermediate monitoring wells. The depth to the top of the shale ranged from 45 to 55 feet.

Underneath the Maquoketa Shale is the Galena Dolomite Formation; however, it was not encountered during the HIR drilling because none of the newly installed wells penetrated the overlying Maquoketa Shale. The existing monitoring wells at the Station that are set into the upper portion of the Galena Dolomite Formation (DSP-157D, DSP-158D, and DSP-159D) were dry when monitored during the HIR.

Two geologic cross-sections were generated employing the stratigraphic data collected during this investigation. The geologic cross-section locations are shown on Figure 5.1 and the geologic lines-of-sections trending north-south and east-west are shown on Figures 5.2 and 5.3, respectively.

Geologic cross-section A-A' (Figure 5.2) is a north-south section running through the center of the Units 2/3 Reactor and Turbine Building and depicts the approximate depth and location of the buildings with respect to the surrounding wells. This cross-section begins to the north of the PA (DSP-149) and terminates to the south of the PA (DSP-157M). This cross-section transects through the middle of the Radwaste Discharge Piping for Units 2/3 and portions of the CST System HPCI Piping.

Geologic cross-section B-B' (Figure 5.3) is a west-east section through the northern section of the Station. This cross-section begins at the western end of the PA

(MW-DN-110I) at the Station and terminates near the northeastern end of the Station close to the fence line bordering the Unit 1 Intake Canal (MW-DN-101I). This cross-section transects through the Radwaste Discharge Piping for Units 2/3 and the northern portions of the Unit 1 Spent Fuel Pool and the CDW Piping from the CST System.

5.2 STATION HYDROGEOLOGY

The water table aquifer at the Station has been divided into two zones, shallow and intermediate. Groundwater contour maps for shallow and intermediate groundwater zones at the Station are illustrated on Figures 5.4 and 5.5, respectively. These figures are discussed further in the section below.

The shallow groundwater zone at the Station represents the saturated portion of the Pottsville Sandstone Formation and extends to the top of the Divine Limestone Formation.

The intermediate groundwater zone at the Station represents the Divine Limestone Formation and extends to the top of the Maquoketa Shale.

The Maquoketa Shale acts as an aquitard, impeding the vertical movement of groundwater and preventing the migration of groundwater downward to the deeper aquifers.

5.2.1 GROUNDWATER FLOW DIRECTIONS

Generally, groundwater flow in both the shallow and intermediate zones at the Station is radially outward from the Station, and is influenced by the Kankakee River, the Illinois River, and the canal network.

The direction of groundwater flow towards the Kankakee and Illinois Rivers is consistent with the description of regional groundwater flow in Section 2.4.3. Both shallow and intermediate groundwater flow have been influenced by the Station's construction, which includes features such as the Unit 1 and Units 2/3 Buildings and the canal network, as discussed in Section 5.2.2.

As indicated in the preceding discussion, the hydrogeologic framework at the Station is influenced by zones of recharge (i.e., area between the canal network and Kankakee

River) and discharge (i.e., Kankakee River and canal network), fracturing (both natural and man-made during Station construction), building foundations, and the canal network.

Shallow Groundwater Zone

The groundwater flow contours on Figure 5.4 were generated using groundwater elevation data from monitoring wells completed in the Pottsville Sandstone Formation and from water levels in the canals. The groundwater flow pattern and water levels in the canal network in the shallow groundwater flow zone are primarily controlled by the location of recharge and discharge zones, and secondarily by man-made structures and fracture distribution and orientation. The shallow groundwater contours parallel the surface water bodies, indicating that the surface water bodies control the groundwater flow patterns in this zone.

A groundwater mound exists to the south of the Units 2/3 Buildings with a high point located at DSP-157S (515.84 feet AMSL) as shown on Figure 5.4.

Intermediate Groundwater Zone

The groundwater flow contours shown on Figure 5.5 were generated using groundwater elevation data from monitoring wells completed in the Divine Limestone Formation. The groundwater flow patterns in the Divine Limestone Formation are primarily controlled by fracture distribution and orientation, and the location of recharge and discharge zones. Secondary influences include man-made structures such as the Station's foundations.

As in the shallow groundwater zone, groundwater in the intermediate zone flows radially outward from the center of the Station. A northwest-southeast oriented groundwater divide is evident and is defined by the groundwater elevation in monitoring wells DSP-125 (513.11 feet AMSL) and DSP-152 (513.02 feet AMSL), which are located south of the PA.

5.2.2 MAN-MADE INFLUENCE ON GROUNDWATER FLOW

Station Structures

Groundwater flow in the shallow zone is generally radially outward from the center of the Station. The groundwater flow is influenced by the presence of the Unit 1 Sphere,

Units 2/3 Reactor and Turbine Buildings, and associated structures including the Unit 1 and Units 2/3 Radwaste Buildings, the Units 2/3 Off-gas Filter Building, the Unit 1 and Units 2/3 Cribhouses, and the Unit 1 Fuel Pool and Fuel Handling Buildings. Worksheets depicting building depths were provided by Station personnel during the completion of this HIR. These buildings were constructed through bedrock (sandstone and limestone) to a depth of approximately 45 to 50 feet bgs and were cast on top of the confining shale layer (Maquoketa Shale) (see Figure 5.2).

As a result, groundwater flows laterally around these structures. There is little variation in geology around the Unit 1 Sphere; however, the groundwater contours for both shallow and intermediate groundwater zones show a slight deflection to the north on the eastern side of the Unit 1 Sphere. The Unit 1 Turbine Building was also constructed through bedrock, but not cast on top of Maquoketa Shale. The depth of its foundations is approximately 26 feet bgs. Therefore, groundwater in the intermediate zone of the water table aquifer flows beneath the Unit 1 Turbine Building.

Canal System

The Canal System at the Station also influences groundwater flow. Both the Hot and Cold Canals are unlined flumes, 8 feet deep and 55 feet wide, which were blasted into the bedrock. Therefore, the base of the canals, especially at the northern end, is within the Pottsville Sandstone.

The canal system flow regimes are controlled by Flow Regulating Gates. Water levels within the canals, especially the Hot Canal, may vary as much as 1 to 2 feet during the day based on the Station's need for cooling water. Water levels in the canals are also influenced by the operation of the cooling towers located along their banks and to the southwest of the PA. The pumps and discharge flumes that are associated with these systems are cycled on and off as needed. Monitoring wells located near the canal and the Cooling Tower Pumps and Discharge Flumes include DSP-127, MW-DN-110S/I, MW-DN-103S/I, MW-DN-121S, MW-DN-123S/I, DSP-159S/M, and DSP-126. These wells will be influenced by the varying water levels in the canals and the accompanying surface water discharge to groundwater.

The Units 2/3 Intake Canal also has an effect on the groundwater levels at the Station as shown on Figure 5.5. There is a groundwater low point to the north of the PA in this area. This low point is attributable to the fact that surface water from the Kankakee River is being pumped into the Units 2/3 Cribhouse within the unlined Units 2/3 Intake Canal, and groundwater is being influenced by the pumping of surface water in this area.

Industrial Cooling Pond

The Hot and Cold Canals run generally north–south to the Industrial Cooling Pond (Pond). The Pond, which covers approximately 1,284 acres, is over 8,700 feet south of the PA (Figure 2.1). The Pond was formed by constructing a clay dike around a low lying area. Approximately 100 drain tiles were installed to drain water from the low lying areas to the Kankakee River. When the pond was constructed these drain tiles were filled with concrete.

The Pond is not lined and is located along the west bank of the Kankakee River. The surface water in the Hot Canal flows south to the Pond and then water from the Pond flows back to the north through the Cold Canal.

Dresden Island Lock and Dam

The normal pool elevation for the Kankakee and Des Plaines Rivers, which join to form the Illinois River, is 505 feet AMSL. Dresden Island Lock and Dam, located approximately 3,000 feet northwest of the Station, control the pool elevation. This lock and dam (which is controlled by the Army Corps of Engineers) also controls the surface water elevations in the Unit 1 and Units 2/3 Intake Canals and the Unit 1 Discharge Canal.

5.2.3 VERTICAL HYDRAULIC GRADIENTS

Groundwater elevation data from several monitoring well nests installed at the Station have been used to calculate the vertical hydraulic gradient between the shallow and intermediate groundwater zones. The calculated hydraulic gradients for the Station are provided in Table 5.1. A moderate downward vertical gradient (0.062 feet/foot) was calculated to the west of the Units 2/3 Building. A moderate downward vertical gradient (0.0215 feet/foot) was also calculated for the well clusters east of the Unit 1 Turbine Building. At the MW-DN-114 well cluster, which is located south of the turbine buildings in a cove between the Unit 2/3 and Unit 1 Turbine Buildings, a strong upward gradient (-0.332 feet/foot) was calculated. A strong upward gradient was also calculated for well cluster MW-DN-123 (-0.566 feet/foot). The average calculated vertical gradient at the Station is approximately -0.02 feet/foot, which indicates that there is an upward gradient across the Station.

5.2.4 LATERAL GROUNDWATER FLOW AND VELOCITY

Shallow Groundwater Zone

Groundwater flow velocity for the shallow zone was calculated using a hydraulic conductivity (slug test methodology) of 34.3 feet per day (RETEC, 2005), a porosity of 30 percent for the Pottsville Sandstone, and a hydraulic gradient of 0.002 to 0.009 foot per foot (based on August 2006 water elevations). The groundwater flow velocity for the shallow zone was calculated to range from 87 to 355 feet per year (ft/yr).

Intermediate Groundwater Zone

Groundwater flow velocity for the intermediate zone was calculated using a hydraulic conductivity (slug test methodology) of 0.67 feet per day (RETEC 2005), a porosity of 10 percent for the Divine Limestone, and a hydraulic gradient of 0.007 to 0.09 foot per foot (based on August 2006 water elevations). The groundwater flow velocity for the intermediate zone was calculated to range from 17 to 225 ft/yr.

The horizontal velocities are representative of the area south of the Units 2/3 Turbine Building since the wells used by RETEC to develop the hydraulic conductivities are located in that area.

5.3 GROUNDWATER QUALITY

CRA personnel collected groundwater samples from 66 monitoring wells at the Station. The samples were analyzed for tritium and additional radionuclides. Teledyne Brown provided the analytical services. The Quality Assurance Program for the laboratory is described in Appendix C. The analytical data reports are provided in Appendix D.

The analytical data presented herein has been subjected to CRA's data validation process. CRA has used the data with appropriate qualifiers where necessary.

The data reported in the figures and tables does not include the results of recounts that the laboratory completed, except if those results ultimately replaced an initial report. The tables and figures, therefore, include only the first analysis reported by the laboratory. Where multiple samples were collected over time, then the most recent result has been used in the discussion, below.

5.3.1 SUMMARY OF BETA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

A summary of the tritium results for the groundwater samples collected during this investigation is provided in Table 5.2 and shown on Figures 5.6 and 5.7.

All tritium concentrations were less than the United States Environmental Protection Agency (USEPA) drinking water standard of 20,000 pCi/L. Tritium was detected at concentrations greater than the LLD of 200 pCi/L.

All strontium-90 concentrations were less than the USEPA drinking water standard of 8.0 pCi/L.

Tritium was detected in groundwater samples from nine locations in the shallow groundwater zone at concentrations ranging from 220 ± 114 pCi/L to 4,250 ± 475 pCi/L.

Tritium was detected in groundwater samples from twenty-one wells in the intermediate groundwater zone at concentrations ranging from 210 ± 124 pCi/L to 13,200 ± 319 pCi/L. The highest concentration was detected in the groundwater sample collected from DSP-123, which was installed in the intermediate groundwater zone to the north of the Unit 1 Sphere.

A summary of the strontium-89/90 results for the groundwater samples collected as part of the investigation that is the subject of this HIR is provided in Table 5.3 and shown on Figures 5.8 and 5.9. Strontium-89/90 was detected in one monitoring well (MW-DN-108I) at a concentration greater than the LLD of 2.0 pCi/L. In August 2006, a sample was collected from this well, and strontium-89/90 was detected at a concentration of 2.72 ± 1.01 pCi/L. This sample was further analyzed for strontium-90, which was detected at a concentration of 2.17 ± 0.783 pCi/L. Furthermore, a duplicate of this sample was analyzed for total strontium and strontium-90. Since the strontium-90 results exceeded the sum of the total strontium in the duplicate sample, it has been concluded that the results of this sample are invalid.

In May 2006, a sample was collected from this monitoring well (MW-DN-108I). Analyses in July 2006 detected strontium-89/90 at a concentration of 4.42 ± 1.23 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 4.37 ± 0.66 pCi/L. In July 2006, the sample was re-analyzed and strontium-89/90 was detected at a concentration of 3.39 ± 0.774 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 2.72 ± 1.29 pCi/L. Because the total strontium from these two samples varied by almost

40 percent and the margin of error was nearly 50 percent, it became necessary to run a third analysis to verify what, if any, detectable concentration existed. This could not be completed for the May 2006 samples due to the samples becoming contaminated at the analytical laboratory. Normal protocol for an anomalous positive result is to perform a confirmatory sampling and analysis of the respective well. Consequently, the well MW-DN-108I was re-sampled in August 2006, as discussed above.

5.3.2 SUMMARY OF GAMMA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLDs. A summary of the gamma-emitting radionuclides results for the groundwater samples collected as part of the investigation that is the subject of this HIR is provided in Table 5.3 and shown on Figures 5.8 and 5.9.

Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

5.3.3 SUMMARY OF FIELD MEASUREMENTS

Table 4.5 presents of a summary of field measurements collected during the well purging and sampling activities. These field measurements included pH, dissolved oxygen, conductivity, turbidity and temperature. The field parameters were typical of a shallow aquifer with carbonate source rock (i.e., the underlying Divine Limestone Formation and Maquoketa Shale). As such, the pH values were found to be above 7.0 and the conductivity was indicative of a shallow water table system subject to surface water recharge.

5.4 SURFACE WATER QUALITY

Six surface water samples were collected from the locations shown on Figure 4.1. The samples were analyzed for tritium, gamma-emitting radionuclides, and strontium-89/90. Teledyne Brown provided the analytical services. The Quality

Assurance Program for the laboratory is described in Appendix C. The analytical data reports are provided in Appendix D.

5.4.1 SUMMARY OF BETA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

Tritium was not detected at concentrations greater than the LLD of 200 pCi/L. A summary of the tritium results for the surface water samples collected in this investigation is provided in Table 5.4 and shown on Figure 5.6.

Strontium-89/90 was not detected at concentrations greater than the LLD of 2.0 pCi/L. A summary of the strontium-89/90 analytical results for the surface water samples collected in this investigation is provided in Table 5.5 and shown on Figure 5.8.

5.4.2 SUMMARY OF GAMMA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLDs. A summary of the gamma-emitting radionuclides results for the surface water samples collected in this investigation is provided in Table 5.5 and shown on Figure 5.8.

Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

6.0 RADIONUCLIDES OF CONCERN AND SOURCE AREAS

This section discusses radionuclides evaluated in this investigation, potential sources of the radionuclides detected, and their distribution.

6.1 GAMMA-EMITTING RADIONUCLIDES

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLDs. Other non-targeted radionuclides were also included in the tables but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

6.2 BETA-EMITTING RADIONUCLIDES

Strontium-89/90 was detected in one monitoring well (MW-DN-108I) at a concentration greater than the LLD of 2.0 pCi/L. In August 2006, a sample was collected from this well, and strontium-89/90 was detected at a concentration of 2.72 ± 1.01 pCi/L. This sample was further analyzed for strontium-90, which was detected at a concentration of 2.17 ± 0.783 pCi/L. Furthermore, a duplicate of this sample was analyzed for total strontium and strontium-90. Since the strontium-90 results exceeded the sum of the total strontium in the duplicate sample, it has been concluded that the results of this sample are invalid.

In May 2006, a sample was collected from this monitoring well (MW-DN-108I). Analyses in July 2006 detected strontium-89/90 at a concentration of 4.42 ± 1.23 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 4.37 ± 0.66 pCi/L. In July 2006, the sample was re-analyzed and strontium-89/90 was detected at a concentration of 3.39 ± 0.774 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 2.72 ± 1.29 pCi/L. Because the total strontium from these two samples varied by almost 40 percent and the margin of error was nearly 50 percent, it became necessary to run a third analysis to verify what, if any, detectable concentration existed. This could not be completed for the May 2006 samples due to the samples becoming contaminated at the analytical laboratory. Normal protocol for an anomalous positive result is to perform a confirmatory sampling and analysis of the respective well. Consequently, the well MW-DN-108I was re-sampled in August 2006, as discussed above.

Tritium was detected at concentrations greater than the LLD of 200 pCi/L. Detectable concentrations of tritium ranged from 210 ± 124 pCi/L to 13,200 ± 319 pCi/L. The following sections focus on tritium and strontium; specifically, providing general characteristics of tritium and strontium, potential sources, distribution in groundwater, and a conceptual model for migration.

6.3 TRITIUM

6.3.1 GENERAL CHARACTERISTICS

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common forms of tritium are tritium gas and tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen. Tritiated water behaves the same as ordinary water in both the environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine within a month or so after ingestion. Organically bound tritium (tritium that is incorporated in organic compounds) can remain in the body for a longer period.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotopes lithium-7 and/or boron-10 are bombarded to produce tritium.

Although tritium can be a gas, its most common form is in water because, like non-radioactive hydrogen, radioactive tritium reacts with oxygen to form water. Tritium replaces one of the stable hydrogen atoms in the water molecule and is called tritiated water. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to helium-3 (^{3}He). This radioactive decay releases a beta particle (low-energy electron). The radioactivity of tritium is the source of the risk of exposure.

Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

6.3.2 DISTRIBUTION IN STATION GROUNDWATER

This section provides an overview of the lateral and vertical distribution of tritium detected in groundwater at the Station. Tritium was detected in groundwater at concentrations greater than the LLD of 200 pCi/L in both the shallow and intermediate groundwater zones.

Hydrogeologic profiles were created across the Station at locations shown on Figure 5.1. Hydrogeologic profiles of the tritium concentrations in groundwater are presented on Figures 6.1, 6.2, and 6.3. The following discussion presents the distribution of tritium concentrations in Station groundwater with respect to the location of a particular AFE.

The distribution of tritium in the shallow groundwater zone is shown on Figure 5.6, and the distribution of tritium in the intermediate groundwater zone is shown on Figure 5.7. As shown in Figures 5.6 and 5.7, there appear to be two primary sources of tritium beneath the Station. One is from the HPCI Piping leaks and the other is from the Unit 1 Fuel Pool overflow. The remainder of this section provides further details on the distribution of the tritium related to the four AFEs.

AFE-Dresden-1: CST System HPCI Piping Leak

The most frequent detections of tritium in the shallow and intermediate groundwater zones were identified near the Units 2/3 Turbine Building on its south, east and west sides. As demonstrated in the following paragraphs, the source of the tritium in this area is historical tritium releases from the CST System HPCI Piping.

The highest concentrations of tritium in the shallow groundwater zone were detected within the area surrounding CST System HPCI Piping at monitoring wells MW-DN-102S (4,250 ± 475 pCi/L), MW-DN-114S (2,770 ± 336 pCi/L), and MW-DN-107S (1,040 ± 165 pCi/L). MW-DN-102S is located approximately 600 feet southwest of CST System HPCI Piping. MW-DN-114S is located approximately 450 feet northeast of CST System HPCI Piping. MW-DN-107S is located approximately 300 feet northeast of CST System HPCI Piping.

Groundwater flows radially outward beneath the PA. Near the CST System HPCI Piping, the flow is to the northwest, west and south-southwest with minimal flow also to the northeast. Tritium detected in groundwater follows this flow path as it moves from the HPCI Piping around the buildings to the northwest (Figure 5.4). Tritium was also detected at concentrations greater than the LLD of 200 pCi/L in groundwater samples collected from monitoring wells MW-DN-111S (638 ± 140 pCi/L) and MW-109S (251 ± 120 pCi/L), located to the west-northwest, hydraulically downgradient of CST System HPCI Piping. In addition, tritium was also detected greater than the LLD of 200 pCi/L in groundwater samples collected from MW-DN-113S (451 ± 136 pCi/L), located to the south of the CST System HPCI Piping. Although MW-DN-113S is not presently downgradient of AFE-Dresden-1, seasonal fluctuations in groundwater elevations could result in this well being downgradient to the AFE.

Within the intermediate groundwater zone, tritium was detected in groundwater samples from monitoring wells DSP-125 (320 ± 127 pCi/L), MW-DN-102I (1,380 ± 195 pCi/L), DSP-124 (10,000 ± 284 pCi/L), MW-DN-109I (3,620 ± 413/3,750 ± 424 pCi/L), MW-DN-112I (1,520 ± 214 pCi/L), and MW-DN-110I (516 ± 134 pCi/L), within the area surrounding CST System HPCI Piping for Units 2/3. DSP-125 is located approximately 100 feet east of the area of the release at the CST System HPCI Piping for Units 2/3. MW-DN-102I is located approximately 600 feet southwest of the CST System HPCI Piping. DSP-124, MW-DN-109I, MW-DN-112I, and MW-DN-110I are all located to the northwest and are located hydraulically downgradient of the release at the CST System HPCI Piping. These tritium levels demonstrate declining (10,000 ± 284 pCi/L to 516 ± 134 pCi/L) concentrations with increased distance from the CST System Piping.

Groundwater flow in and around the Units 2/3 Turbine Building is radially outward from the center of the PA as depicted for the shallow and intermediate groundwater zones on Figures 5.4 and 5.5. This flow pattern provides a potential explanation for the detection of tritium greater than the LLD of 200 pCi/L in the groundwater samples from monitoring wells MW-DN-102S and MW-DN-102I, which are located southwest of the CST. Groundwater containing tritium that has originated in the area of the HPCI Piping for Units 2/3 also migrates to the northeast underneath the Unit 1 Turbine Building within the intermediate zone of the water table aquifer.

AFE-Dresden-2: Unit 1 Spent Fuel Pool

Groundwater flow within the shallow groundwater zone in the area of the Unit 1 Spent Fuel Pool is consistent with the general flow direction across the Station. However, there is a slight deflection of groundwater flow east of the Unit 1 Turbine Building due

to the influence of the structure at that location. The closest shallow monitoring well to the Unit 1 Spent Fuel Pool is MW-DN-118S. The groundwater sample from this well contained tritium at a concentration of 1,650 ± 227 pCi/L while the sample from MW-DN-105S, located upgradient of the Unit 1 Spent Fuel Pool, did not contain tritium at concentrations greater than the LLD of 200 pCi/L. MW-DN-101S is located to the north of the Unit 1 Spent Fuel Pool along the banks of the Unit 1 Intake Canal. The groundwater sample from MW-DN-101S had a tritium concentration of 220 ± 114 pCi/L, only slightly greater than the LLD of 200 pCi/L.

The highest concentration of tritium in the intermediate groundwater zone across the Station was detected in a groundwater sample from DSP-123 (13,100 ± 318/13,200 ± 319 pCi/L), which is directly north of the Unit 1 Spent Fuel Pool and also to the north of the Unit 1 Sphere, but along the groundwater flow path originating south of the Turbine Building. MW-DN-119I (1,470 ± 211 pCi/L) is also located along the flow path originating from the Fuel Pool. DSP-105, DSP-106, DSP-107, and DSP-108 are located to the south and east of the Unit 1 Turbine Building and Sphere. Within the intermediate groundwater zone tritium was detected in groundwater samples from monitoring wells DSP-105 (319 ± 117 pCi/L), DSP-106 (2,370 ± 289 pCi/L), DSP-107 (9,820 ± 1,030 pCi/L), DSP-108 (1,930 ± 244 pCi/L), DSP-123 (13,200 ± 319 pCi/L), and MW-DN-101I (4,570 ± 208 pCi/L).

Tritium detected in the groundwater samples from shallow and intermediate monitoring wells in this area is primarily the result of the Unit 1 Spent Fuel Pool historical release.

AFE-Dresden-3: Radwaste Discharge Piping for Units 2/3

There are six wells that are used to evaluate the water quality near this AFE. Groundwater samples from three of these wells contained less than detectable concentrations of tritium. The other three monitoring wells had tritium concentrations ranging from 356 to 1,440 pCi/L.

The groundwater quality downgradient of Radwaste Discharge lines for Units 2/3 is characterized by the analysis of groundwater samples from MW-DN-104S, installed along the Radwaste Discharge Lines for Units 2/3. MW-DN-104S is hydraulically downgradient of the Radwaste Surge Tank and the point at which the discharge piping penetrates the structure. The groundwater sample from this well did not contain tritium at a concentration greater than the LLD of 200 pCi/L. Groundwater flow near the Radwaste Discharge Lines for Units 2/3 is to the north-northeast, consistent with the general groundwater flow direction in the shallow groundwater zone at the Station.

Within the intermediate groundwater zone, tritium was detected in groundwater samples from monitoring wells DSP-122 (1,440 ± 139 pCi/L), DSP-149R (668 ± 144/694 ± 143 pCi/L), and DSP-148 (356 ± 111 pCi/L). These wells are located near the Radwaste Discharge Piping and downgradient of the 77,000-gallon Radwaste Surge Tank where historical releases have been identified.

The low concentrations of tritium detected in the shallow and intermediate monitoring wells discussed above is likely associated with historical releases from the Radwaste Discharge Piping for Units 2/3, influence from the canal, or both.

AFE-Dresden-4: Piping from CST System and Storm Drain to Unit 1 Intake Canal

The footprint of AFE-Dresden-4 includes the area occupied by the CST System piping and the storm drains that discharge to the Unit 1 Intake Canal. The shallow wells, MW-DN-105S, MW-DN-101S MW-DN-115S, MW-DN-118S, are located in close proximity to the East Drainage Basin storm drain that discharges to the Unit 1 Intake Canal. The groundwater sample from MW-DN-101S contained tritium at a concentration slightly greater than the LLD of 200 pCi/L (220 ± 114 pCi/L) while the upgradient location of MW-DN-118S had tritium detected at 1,650 ± 227 pCi/L. The groundwater samples from MW-DN-105S and MW-DN-115S were non-detect for tritium at the LLD of 200 pCi/L. In the shallow groundwater zone, two shallow wells, MW-DN-107S and MW-DN-114S, are located near the CST System HPCI Piping leak and had tritium concentrations in groundwater samples of 1,040 ± 165 pCi/L and 2,770 ± 336 pCi/L, respectively. Groundwater flow within the area surrounding the CST System HPCI Piping and Storm Drain to Unit 1 Intake Canal is also locally to the north-northeast, consistent with the general radial flow direction at the Station and with the flow moving around the buildings.

Within the intermediate groundwater zone, tritium was detected in groundwater samples from monitoring wells DSP-125 (320 ± 127 pCi/L), DSP-105 (319 ± 117 pCi/L), DSP-106 (2,370 ± 289 pCi/L), DSP-107 (9,820 ± 1,030 pCi/L), DSP-108 (1,930 ± 244 pCi/L), MW-DN-101I (4,570 ± 208 pCi/L), MW-DN-114I (4,190 ± 473 pCi/L), and MW-DN-119I (1,470 ± 211 pCi/L). DSP-105, DSP-106, DSP-107, DSP-108, and MW-DN-119I are all located in close proximity to the storm drain servicing the Unit 1 Intake Canal. The detections of tritium in these wells may be the result of a combination of releases from AFE–Dresden-1 and AFE-Dresden-4.

Most of the storm drainage system adjacent to the Turbine Buildings is constructed below the water table. Portions of the storm drainage system lie below the water table

by as much as 3 feet. As such, infiltration of groundwater into the storm drainage system that extends from AFE-Dresden-1 to AFE-Dresden-4 is contributing to the movement of tritiated water along southern, eastern and western sides of the Turbine Buildings. This is consistent with groundwater movement in this area. Therefore, the majority of the groundwater that enters the storm drains or surrounding fill would eventually discharge into the Canal System.

The Station currently performs weekly monitoring of two manhole locations that are located upstream from the discharge points for the East Drainage Basin and the West Drainage Basin. Manhole DSP-131 is the final manhole on the West Drainage Basin system prior to discharge into the Unit 2&3 Discharge Canal. The August 2006 tritium concentration at DSP-131 was 600 pCi/L. Manhole DSP-132 is the final manhole on the East Drainage Basin system prior to discharge into the Unit 1 Intake Canal. The August 2006 tritium concentration at DSP-132 was 700 pCi/L.

6.3.3 DISTRIBUTION IN STATION SURFACE WATER

Tritium was not detected in the six surface water samples at concentrations greater than the LLD of 200 pCi/L. The surface water sample locations are shown on Figure 4.1.

6.3.4 CONCEPTUAL MODEL OF TRITIUM RELEASE AND MIGRATION

This section presents CRA's conceptual model of groundwater and tritium migration at the Station.

Hydrogeologic Framework

Based upon existing Station data from boring logs and water level data, the groundwater flow in the water table aquifer is expected to move under conditions equivalent to porous media flow. The sandstone and the limestone bedrock have characteristics that are equivalent to a porous medium at the scale of this investigation. Therefore, discussions of groundwater flow within the shallow and intermediate zones of the water table aquifer are assumed to be under porous media conditions.

Groundwater flow within the water table aquifer at the Station generally moves from southwest to the northeast to the regional discharge points in the Kankakee and Illinois Rivers. Structures and operations at the Station have modified the flow within the water

table aquifer before it reaches the river systems. The canals act like partially penetrating streams, and may receive water from or discharge water to the groundwater system.

The locations of the canals and the rivers with respect to the Station result in radial groundwater flow from the center of the PA. The potentiometric surface represented on Figures 5.4 and 5.5 demonstrate the multiple groundwater discharge locations and the resultant radial pattern to those locations.

Building foundations and fill also influence groundwater flow by redirecting groundwater flow. For example, as groundwater flows toward the rivers and canals, it encounters the basements and backfill around the Turbine Buildings and other buildings.

The operation of the intake structure near the north side of the Units 2/3 Turbine Building appears to have some localized influence on groundwater flow as is evident by the potentiometric surface shown on Figure 5.4. This figure suggests that the pumping of water into this structure creates a capture zone of groundwater.

Groundwater flow at the Station is limited in the vertical direction by the presence of the Maquoketa Shale. The hydrogeologic profiles presented on Figures 6.1 to 6.3 demonstrate that tritium has not migrated deeper than the base of the Divine Limestone/top of the Maquoketa Shale.

The following presents the tritiated water migration pathways:

- Historic data shows that tritiated water has entered the Station Canal System via the Intake Canal from the Kankakee River.
- Tritiated groundwater flows beneath and around the structures and enters the Canal System via the Intake Canal at the intake structure.
- Surface water in the Canal System can migrate both vertically and laterally into groundwater.
- Tritiated groundwater appears to infiltrate into storm drains, which are submerged below the water table, and enter the Canal System when the storm drains discharge to the Canal System, including the Intake Canal.
- Tritiated Kankakee River water in the canal systems can discharge to groundwater, under certain conditions, and then migrate back toward Kankakee River and some residential wells.

6.4 STRONTIUM

6.4.1 GENERAL CHARACTERISTICS

Elemental strontium occurs naturally in the earth's mantle as a mixture of four stable isotopes (strontium-88, strontium-86, strontium-87, and strontium-84), and is present everywhere in very dilute concentrations. It is very similar to calcium in its environmental and physiological behavior. All four isotopes behave the same chemically, so any combination of the four would have the same chemical effect on the body.

The radioactive isotopes of strontium do not occur naturally but are produced as a by-product of nuclear fission of uranium-235, uranium-238, or plutonium-239. The most significant isotopes are strontium-90 (half-life of 29 years), strontium-89 (half-life of 51 days), and strontium-85 (half-life of 65 days), which decay by the emission of beta particles. Strontium-90 releases beta particles and decays into yttrium-90. Yttrium-90 decays to the stable isotope zirconium-90.

The Agency for Toxic Substances and Disease Registry (ATSDR) provides a toxicological profile for strontium (ATSDR, 2004). According to this profile, strontium behaves similar to calcium and is absorbed by the body and deposited in bone and blood-forming tissue (bone marrow) when food and water products containing trace amounts are ingested. Strontium-90 has a relatively long half-life of 29 years. The most serious effects of oral exposure to absorbed radioactive strontium are necrotic lesions and cancers of bone and the adjacent tissues. High-level acute exposures can destroy bone marrow, leading to acute radiation syndrome. At lower doses, irradiation of bone marrow may lead to chronic suppression of immune functions.

6.4.2 DISTRIBUTION IN STATION GROUNDWATER

This section provides an overview of the lateral and vertical distribution of strontium-90 detected in groundwater at the Station. Strontium-90 was detected in groundwater at concentrations exceeding the LLD of 2 pCi/L in the intermediate groundwater zone.

Since strontium-90 was detected at only one groundwater monitoring location (well MW-DN-108I), the following discussion presents the distribution of strontium-90 concentrations in Station groundwater with respect to monitoring well MW-DN-108I.

Groundwater Monitoring Well MW-DN-108I

Strontium-89/90 was detected in one monitoring well (MW-DN-108I) at a concentration greater than the LLD of 2.0 pCi/L. In August 2006, a sample was collected from this well, and strontium-89/90 was detected at a concentration of 2.72 ± 1.01 pCi/L. This sample was further analyzed for strontium-90, which was detected at a concentration of 2.17 ± 0.783 pCi/L. Furthermore, a duplicate of this sample was analyzed for total strontium and strontium-90. Since the strontium-90 results exceeded the sum of the total strontium in the duplicate sample, it has been concluded that the results of this sample are invalid.

In May 2006, a sample was collected from this monitoring well (MW-DN-108I). Analyses in July 2006 detected strontium-89/90 at a concentration of 4.42 ± 1.23 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 4.37 ± 0.66 pCi/L. In July 2006, the sample was re-analyzed and strontium-89/90 was detected at a concentration of 3.39 ± 0.774 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 2.72 ± 1.29 pCi/L. Because the total strontium from these two samples varied by almost 40 percent and the margin of error was nearly 50 percent, it became necessary to run a third analysis to verify what, if any, detectable concentration existed. This could not be completed for the May 2006 samples due to the samples becoming contaminated at the analytical laboratory. Normal protocol for an anomalous positive result is to perform a confirmatory sampling and analysis of the respective well. Consequently, the well MW-DN-108I was re-sampled in August 2006, as discussed above.

This well is located in the vicinity of the Unit 1 Off-Gas Hold-up Piping to the Unit 1 Off-Gas Suppression System. In November 1975, a ditch which had been dug to connect piping between the Unit 1 Off-Gas Hold-up Piping and the newly constructed Unit 1 Off-Gas Suppression System, began to fill with rainwater which flowed along the ditch towards the Unit 1 Circulating Water Intake Canal. The off-gas pipe was breached at the time allowing contaminants from inside the pipe to be flushed out into the ditch (surrounding soil). This release is the likely source of the strontium-89/90 detected in groundwater samples collected from well MW-DN-108I.

Since strontium-89/90 was not detected at concentrations above the LLD of 2.0 pCi/L in groundwater samples from any of the other groundwater monitoring wells throughout the Station property and adjacent to well MW-DN-108I, it is assumed that the detection of strontium-89/90 is localized to this area.

6.4.3 DISTRIBUTION IN STATION SURFACE WATER

Strontium was not detected in the six surface water samples at concentrations greater than the LLD of 2.0 pCi/L.

7.0 EXPOSURE PATHWAY ASSESSMENT

This section addresses the groundwater impacts from tritium at the Station and potential risks to human health and the environment.

Based upon historical knowledge and data related to the Station operations, and based upon radionuclide analyses of groundwater samples and the isolated detection of strontium-90 in the groundwater sample from MW-DN-108I, the primary constituent of concern (COC) is tritium. The discussions that follow are restricted to the exposure pathways related to tritium.

Teledyne Brown reports all samples to their statistically derived minimum detectable concentrations (MDC) approximately 150 to 170 pCi/L, which is associated with 95 percent confidence interval on their hard-copy reports. However, the laboratory uses a 99 percent confidence range (± 3-sigma) for determining whether to report the sample activity concentration as detected or not. This 3-sigma confidence typically equates to 150 (± 135.75) pCi/L.

Exelon has specified a LLD of 200 pCi/L for the Fleetwide Assessment. Exelon has also required the laboratory to report related peaks identified at the 95 percent confidence level (2-sigma).

This HIR, therefore, screens and assesses data using Exelon's LLD of 200 pCi/L. As is outlined below, this concentration is also a reasonable approximation of the background concentration of tritium in groundwater at the Station.

7.1 HEALTH EFFECTS OF TRITIUM

Tritium is a radionuclide that decays by emitting a low-energy beta particle that cannot penetrate deeply into tissue or travel far in air. A person's exposure to tritium is primarily through the ingestion of water (drinking water) or through ingestion of water bearing food products. Inhalation of tritium requires the water to be in a vapor form (i.e., through evaporation or vaporization due to heating). Inhalation is a minor exposure route when compared to direct ingestion or drinking of tritiated water. Absorption of tritium through skin is possible, but tritium exposure is more limited here versus direct ingestion or drinking of tritiated water.

7.2 BACKGROUND CONCENTRATIONS OF TRITIUM

The purpose of the following paragraphs is to establish a background concentration through review of various media.

7.2.1 GROUNDWATER

Tritium is created in the environment from naturally occurring processes both cosmic and subterranean, as well as from anthropogenic (i.e., man-made) sources. In the upper atmosphere, "cosmogenic" tritium is produced from the bombardment of stable nuclides and combines with oxygen to form tritiated water, which will then enter the hydrologic cycle. Below ground, "lithogenic" tritium is produced by the bombardment of natural lithium isotopes ^{6}Li *(92.5% abundance)* and ^{7}Li *(7.5% abundance)* present in crystalline rocks by neutrons produced by the radioactive decay of uranium and thorium. Lithogenic production of tritium is usually negligible compared to other sources due to the limited abundance of lithium in rock. The lithogenic tritium is introduced directly to groundwater.

A major anthropogenic source of tritium comes from the former atmospheric testing of thermonuclear weapons. Levels of tritium in precipitation increased during the 1950s and early 1960s, coinciding with the release of significant amounts of tritium to the atmosphere during nuclear weapons testing prior to the signing of the Limited Test Ban Treaty in 1963, which prohibited atmospheric nuclear tests.

7.2.2 PRECIPITATION DATA

Precipitation samples are routinely collected at stations around the world for the analysis of tritium and other radionuclides. Two publicly available databases that provide tritium concentrations in precipitation are Global Network of Isotopes in Precipitation (GNIP) and USEPA's RadNet database. GNIP provides tritium precipitation concentration data for samples collected world wide from 1960 to 2006. RadNet provides tritium precipitation concentration data for samples collected at Stations through the U.S. from 1960 up to and including 2006.

Based on GNIP data for sample stations located in the U.S. Midwest including Chicago, St. Louis and Madison, Wisconsin, as well as Ottawa Ontario, and data from the University of Chicago, tritium concentrations peaked around 1963. This peak, which approached 10,000 pCi/L for some stations, coincided with the atmospheric testing of

thermonuclear weapons. Tritium concentrations showed a sharp decline up until 1975 followed by a gradual decline since that time. Tritium concentrations in Midwest precipitation have typically been below 100 pCi/L since around 1980.

The RadNet database for several stations in the U.S. Midwest (Chicago, Columbus, Indianapolis, Lansing, Madison, Minneapolis, Painesville, Toledo, and Welsch, MN) did not show the same trend, which can attributed to pre-1995 data handling procedures. The pre-1995 data were rounded to the nearest 100 pCi/L, which damped out variances in the data. The post-1995 RadNet data, where rounding was not applied, exhibit much more scatter, and similar to the GNIP data, the vast majority of the data were less than 100 pCi/L.

CRA constructed a non-parametric upper tolerance limit with a confidence of 95 percent and a coverage of 95 percent based on RadNet data for USEPA Region 5 from 2004 to 2005. The resulting upper tolerance limit is 133 pCi/L, which indicates that CRA is 95 percent confident that 95 percent of the ambient precipitation concentration results are below 133 pCi/L. The statistical confidence, however, must be compared with the limitations of the underlying RadNet data, which does not include the minimum detectable concentration for a majority of the measurements. Some of the RadNet values below 200 pCi/L may be approximated. Nevertheless, these results show a background contribution for precipitation of up to 133 pCi/L.

7.2.3 SURFACE WATER DATA

Tritium concentrations are routinely measured in large surface water bodies, including Lake Michigan and the Mississippi River. Surface water data from the RadNet database for Illinois sampling stations include East Moline (Mississippi River), Moline (Mississippi River), Marseilles (Illinois River), Morris (Illinois River), Oregon (Rock River), and Zion (Lake Michigan). As is the case for the RadNet precipitation data, the pre-September 1995 Illinois surface water data was rounded to the nearest 100 pCi/L, creating a dampening of variances in the data. The post-1995 Illinois surface water data, similar to the post-1995 Midwest precipitation data, were less than 100 pCi/L with the exception of the Moline (Mississippi River) station. Tritium surface water concentrations at this location varied between 100 and 800 pCi/L, which may reflect local natural or anthropogenic inputs.

The USEPA RadNet surface water data typically has a reported 'Combined Standard Uncertainty' of 35 to 50 pCi/L. According to USEPA, this corresponds to a ± 70 to 100 pCi/L 95 percent confidence bound on each given measurement. Therefore,

the typical background data provided may be subject to measurement uncertainty of approximately ± 70 to 100 pCi/L.

As part of the REMP, tritium concentrations are measured in the Kankakee, Des Plaines and Illinois Rivers as well as within the canal network at the Station.

Surface water samples are collected as part of REMP at a total of three locations. Samples are collected at two locations upstream of the Station on the Kankakee (D-54) and Des Plaines (D-52) Rivers, and at one location downstream of the Station on the Illinois River (D-51). The concentration of tritium within the Kankakee River (D-54) was not greater than the LLD of 200 pCi/L since 2003 but increased to 720 pCi/L in 2005 and is attributable to an upstream source. The concentration of tritium within the Des Plaines River (D-52) has not been greater than the LLD of 200 pCi/L since 2000 except for one sample at 230 pCi/L in 2003. The concentration of tritium within the Illinois River (D-51) has fluctuated from less than the LLD of 200 pCi/L since 2000 to a maximum concentration of 1,974 pCi/L in 2002.

Since January 2005, the concentration of tritium in the Station intake has ranged from the LLD of 200 pCi/L to greater than 2,500 pCi/L. In addition, available data indicates that upstream background concentrations in the Kankakee River have ranged from LLD of 200 pCi/L to greater than 6,900 pCi/L (RETEC, 2004). The intake canal sample is a direct representation of tritium concentrations in the Kankakee River.

7.2.4 DRINKING WATER DATA

Tritium concentrations in drinking water from the RadNet database for three Illinois sampling stations (Chicago, Morris, and East Chicago) exhibit similar trends to the precipitation and surface water data. As with the precipitation and surface water data, the pre-1995 data has dampened out variances due to rounding the data to the nearest 100 pCi/L. The post-1995 results show tritium concentrations in samples of drinking water were less than 100 pCi/L and less than the tritium concentrations found in precipitation and surface water.

A residential well, designated RW-1, has been sampled for tritium for over 10 years as part of the Offsite Dose Calculation Manual (ODCM) and is located approximately 0.7 miles south of the plant. Prior to 1995, the groundwater samples from this well consistently contained tritium concentrations less than 300 pCi/L. From 1995 to April 2005, tritium concentrations increased from 232 to 940 pCi/L.

Based on the tritium found in RW-1, in December 2004, Exelon sampled 34 additional residential wells in the same neighborhood. Tritium was detected in groundwater samples from three of the 34 residential wells, designated RW-2, RW-3, and RW-4. These wells are all located beside the Kankakee River to the south of the Station. The locations of these wells are shown on Figure B.1 in Appendix B.

A groundwater sample was collected from the RW-2 well on December 2, 2004, and the sample was split for analysis by two independent laboratories. Due to the discrepancy in the results (366 pCi/L versus 114 pCi/L), another sample was collected on January 13, 2005, and four aliquots were reported ranging in concentration from 360 to 480 pCi/L. Another sample was collected on April 15, 2005, and the reported tritium concentration was 542 pCi/L.

Groundwater samples were collected from the RW-3 well on September 21, 2005 with a concentration of 369 pCi/L and the RW-4 well on August 29, 2005 with a concentration of 468 pCi/L.

A water sample collected from the RW-1 well on April 15, 2005 contained tritium at a concentration of 653 pCi/L. A sample collected from the RW-2 well on the same date contained 542 pCi/L of tritium.

Based on the results of this investigation, the low tritium concentration impact observed in the residential wells to the south of the Station is principally, if not entirely, due to the discharge of tritiated Kankakee River water to groundwater. In addition, the HIR data demonstrate that there is no measurable tritium impact in the canal network from current groundwater migration to the canal network in the vicinity of the PA.

7.2.5 EXPECTED TRITIUM BACKGROUND FOR THE STATION

As reported in the GNIP and RadNet databases, tritium concentrations in U.S. Midwest precipitation has typically been less than 100 pCi/L since 1980. Tritium concentrations reported in the RadNet database for Illinois surface water and groundwater, at least since 1995, has typically been less than 100 pCi/L. Based on the USEPA Region 5 2004 to 2005 RadNet precipitation data, 95 percent of the ambient concentrations of tritiated water in Illinois are expected to be less than 133 pCi/L, based on a 95 percent confidence limit. Tritium concentrations in surface water and drinking water are expected to be comparable or less based on historical data and trends.

Concentrations in groundwater, similar to surface and drinking water, are expected to be less than precipitation values. The lower groundwater concentrations are related to the age of the groundwater as compared to the half-life of tritium. Deep aquifers in proximity to crystalline basement rock, however, can potentially show elevated concentrations of tritium due to lithogenic sources.

As was noted in Section 7.0, the analytical laboratory is reporting tritium results to a LLD of 200 pCi/L. This concentration also provides a reasonable representation of background groundwater quality, given the data for precipitation, surface water, and drinking water.

Based on the evaluation presented above, the background concentration for tritium at the Station is reasonably represented by the LLD of 200 pCi/L.

7.3 IDENTIFICATION OF POTENTIAL EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Four potential exposure pathways were identified and considered during the evaluation of tritium in groundwater.

- potential groundwater migration to drinking water users on the Station property;
- potential groundwater migration off the Station property to private and public groundwater users;
- potential groundwater migration off the Station property to a surface water body; and
- potential surface water migration to groundwater off the Station property.

The following section provides an overview these four potential exposure pathways for tritium in groundwater.

7.3.1 POTENTIAL GROUNDWATER MIGRATION TO DRINKING WATER USERS AT THE STATION PROPERTY

At the Station, the tritium detected in groundwater samples has been isolated to the water table aquifer, which is isolated from the deeper regional groundwater aquifer by the Maquoketa Shale. Groundwater quality data from the Station's potable wells that are completed below this aquitard do not contain concentrations of tritium greater than the LLD of 200 pCi/L. As such, the tritium impact is limited to the water table aquifer.

There are no water supply wells located on the Station property that draw water from the water table aquifer.

There is no complete exposure pathway. Therefore, there is no current risk of exposure associated with groundwater ingestion at the Station.

7.3.2 POTENTIAL GROUNDWATER MIGRATION TO DRINKING WATER USERS OFF THE STATION PROPERTY

The concentrations of tritium in groundwater are less than the USEPA drinking water standard of 20,000 pCi/L. Consequently, there is currently no tritium in the groundwater that could migrate off the Station at concentrations exceeding the USEPA drinking water standard.

There are private water supply wells located on land to the south of the Station. Based on groundwater flow maps, it is unlikely that tritiated groundwater beneath the Station could migrate to the south in the intermediate flow system and onto the private property.

Although there is a potentially complete exposure pathway, there is no current risk of exposure associated with this pathway.

7.3.3 POTENTIAL GROUNDWATER MIGRATION TO SURFACE WATER USERS OFF THE STATION PROPERTY

Groundwater at the Station discharges to Kankakee and Illinois Rivers or through the Discharge Canal. Therefore, there is a potentially complete exposure route to recreational users of surface water including boating, fishing, and swimming.

Tritium results for surface water samples collected as part of this investigation were less than the LLD of 200 pCi/L. In addition, based on the results of this investigation, the Station is not causing any off-Station concentrations of tritium above detectable limits.

Although there is a potentially complete exposure pathway, there is no current risk of exposure associated with groundwater migration to surface water users off the Station property.

7.3.4 POTENTIAL SURFACE WATER MIGRATION TO GROUNDWATER AND SURFACE WATER OFF THE STATION PROPERTY

Surface water within the Canal System could potentially migrate from the Canal System to groundwater off the Station property. Tritium results for surface water samples collected as part of this investigation were less than the LLD of 200 pCi/L.

As discussed in Section 7.2.4, private wells south of the Station were sampled to evaluate potential impact of the Station's operations on groundwater. The Canal System historically contained elevated tritium concentrations as high as approximately 6,900 pCi/L due to upgradient sources in the Kankakee River. Therefore, as discussed above, the source of these low concentrations in the off-Station wells is principally, if not entirely, due to the discharge of tritiated Kankakee River water to groundwater. In addition, the HIR data demonstrate that there is no measurable tritium impact in the canal network from current groundwater migration to the canal network in the vicinity of the PA.

Although there is a potentially complete exposure pathway, there is no current risk of exposure associated with migration of tritium originating from the Station to the Canal System to groundwater off the Station property.

7.4 SUMMARY OF POTENTIAL TRITIUM EXPOSURE PATHWAYS

In summary, there are four potential groundwater exposure pathways for tritium originating at the Station:

- potential groundwater migration to drinking water users on the Station property;
- potential groundwater migration off the Station property to private and public groundwater users;
- potential groundwater migration off the Station property to a surface water body; and
- potential surface water migration to groundwater off the Station property.

Based on the groundwater and surface water data provided and referenced in this investigation, none of the potential receptors are at risk of exposure to concentrations of tritium in excess of USEPA drinking water standard (20,000 pCi/L).

7.5 OTHER RADIONUCLIDES

Strontium-89/90 was detected in one monitoring well (MW-DN-108I) at a concentration greater than the LLD of 2.0 pCi/L. In August 2006, a sample was collected from this well, and strontium-89/90 was detected at a concentration of 2.72 ± 1.01 pCi/L. This sample was further analyzed for strontium-90, which was detected at a concentration of 2.17 ± 0.783 pCi/L. Furthermore, a duplicate of this sample was analyzed for total strontium and strontium-90. Since the strontium-90 results exceeded the sum of the total strontium in the duplicate sample, it has been concluded that the results of this sample are invalid.

In May 2006, a sample was collected from this monitoring well (MW-DN-108I). Analyses in July 2006 detected strontium-89/90 at a concentration of 4.42 ± 1.23 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 4.37 ± 0.66 pCi/L. In July 2006, the sample was re-analyzed and strontium-89/90 was detected at a concentration of 3.39 ± 0.774 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 2.72 ± 1.29 pCi/L. Because the total strontium from these two samples varied by almost 40 percent and the margin of error was nearly 50 percent, it became necessary to run a third analysis to verify what, if any, detectable concentration existed. This could not be completed for the May 2006 samples due to the samples becoming contaminated at the analytical laboratory. Normal protocol for an anomalous positive result is to perform a confirmatory sampling and analysis of the respective well. Consequently, the well MW-DN-108I was re-sampled in August 2006, as discussed above.

It is concluded that this detection is localized to the vicinity of MW-DN-108I. On this basis, there is limited discussion of this result in this report.

No target radionuclides were detected in the groundwater and surface water samples at concentrations greater than their respective LLDs. Other non-target radionuclides were also included in the tables but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

8.0 CONCLUSIONS

Based on this hydrogeologic investigation, CRA concludes:

Groundwater Flow

- There are two significant underlying water-bearing units, Pottsville Sandstone (shallow groundwater zone) and the Divine Limestone (intermediate groundwater zone), beneath the Station. The two formations comprise the water table aquifer.
- The water table aquifer extends through the entire thickness of these two units and is underlain by the Maquoketa Shale, which acts as an aquitard and is continuous across the Station.
- The depth to groundwater beneath the Station ranges between 3 to 23 feet bgs.
- Groundwater flow is influenced by the canal network and the foundations of buildings such that the shallow and intermediate groundwater flows radially outwards from the center of the PA towards the canals and rivers. The canals also influence the flow of groundwater in the intermediate groundwater zone. The shallow groundwater zone discharges to the canal as does the intermediate groundwater zone but to a lesser degree.
- The horizontal groundwater flow velocity for the shallow groundwater zone ranges from 87 to 355 ft/yr while the intermediate groundwater flow velocity ranges from 17 to 225 ft/yr.
- The Station canals act as an interceptor trench for the shallow groundwater zone while the intermediate zone is partially intercepted by the Station canals. Seasonal changes result in differing degrees of hydraulic communication between the groundwater and the canal system.

Groundwater Quality

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the 68 groundwater samples collected as part of this investigation.
- Strontium-90 was not detected in groundwater at concentrations greater than the USEPA drinking water standard of 8.0 pCi/L.
- Strontium-89/90 was detected in one monitoring well (MW-DN-108I) at a concentration greater than the LLD of 2.0 pCi/L. In August 2006, a sample was collected from this well, and strontium-89/90 was detected at a concentration of 2.72 ± 1.01 pCi/L. This sample was further analyzed for strontium-90, which was

detected at a concentration of 2.17 ± 0.783 pCi/L. Furthermore, a duplicate of this sample was analyzed for total strontium and strontium-90. Since the strontium-90 results exceeded the sum of the total strontium in the duplicate sample, it has been concluded that the results of this sample are invalid.

In May 2006, a sample was collected from this monitoring well (MW-DN-108I). Analyses in July 2006 detected strontium-89/90 at a concentration of 4.42 ± 1.23 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 4.37 ± 0.66 pCi/L. In July 2006, the sample was re-analyzed and strontium-89/90 was detected at a concentration of 3.39 ± 0.774 pCi/L. In July 2006, this sample was further analyzed for strontium-90, which was detected at a concentration of 2.72 ± 1.29 pCi/L. Because the total strontium from these two samples varied by almost 40 percent and the margin of error was nearly 50 percent, it became necessary to run a third analysis to verify what, if any, detectable concentration existed. This could not be completed for the May 2006 samples due to the samples becoming contaminated at the analytical laboratory. Normal protocol for an anomalous positive result is to perform a confirmatory sampling and analysis of the respective well. Consequently, the well MW-DN-108I was re-sampled in August 2006, as discussed above.

- Tritium was not detected in groundwater at concentrations greater than the USEPA drinking water standard of 20,000 pCi/L.
- Tritium was detected in groundwater samples from nine monitoring wells in the shallow groundwater zone at concentrations ranging from 220 ± 114 pCi/L to 4,250 ± 475 pCi/L.
- Tritium was detected in groundwater samples from twenty-one wells in the intermediate groundwater zone at concentrations ranging from 210 ± 124 pCi/L to 13,200 ± 319 pCi/L.

Surface Water Quality

- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the six surface water samples collected as part of this investigation.
- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the six surface water samples collected as part of this investigation.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the six surface water samples collected as part of this investigation.

AFE-Dresden-1: CST System HPCI Piping for Units 2/3

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples obtained from the monitoring wells located in close proximity to the CST System HPCI Piping.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples obtained from the monitoring wells located in close proximity to the CST System HPCI Piping.
- In the area surrounding the CST System HPCI Piping, tritium was detected in the shallow and intermediate groundwater zones. The groundwater flows with the local hydraulic gradient, to the northwest around the Units 2/3 Turbine Building, and under the Unit 1 Turbine Building.
- There are 12 monitoring wells associated with this AFE. The groundwater samples contained tritium at concentrations ranging from less than the LLD of 200 pCi/L to 10,000 ± 284 pCi/L.
- Tritium in groundwater samples collected in the CST System HPCI Piping area is primarily attributable to the historical releases in this area.

AFE-Dresden-2: Unit 1 Spent Fuel Pool

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the monitoring wells near the fuel pool.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples obtained from the monitoring wells located in close proximity to this AFE.
- Tritium was detected in the area surrounding the Unit 1 Spent Fuel Pool at concentrations greater than LLD of 200 pCi/L in the groundwater samples from the shallow and intermediate groundwater monitoring wells.
- There are 10 monitoring wells associated with this AFE. The groundwater samples contained tritium at concentrations ranging from less than the LLD of 200 pCi/L to 13,200 ± 319 pCi/L.
- Tritium in groundwater samples collected in the area north of the Unit 1 Spent Fuel Pool is likely attributable to the Unit 1 Spent Fuel Pool historical release.

AFE-Dresden-3: Radwaste Discharge Lines for Units 2/3

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the monitoring wells located in close proximity to Radwaste Discharge Piping for Units 2/3.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples obtained from the monitoring wells located in close proximity to this AFE.
- Tritium was detected in samples from three of the six monitoring wells near the Radwaste Discharge Piping. The groundwater samples contained tritium at concentrations ranging from less than the LLD of 200 pCi/L to 1,440 ± 139 pCi/L.
- Tritium in groundwater samples collected in the area of the Radwaste Discharge Lines for Units 2/3 is primarily attributable to the historical releases in this area.

AFE-Dresden-4: Piping from CST System and Storm Drain to Unit 1 Intake Canal

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples obtained from the monitoring wells located near the storm drain.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples obtained from the monitoring wells located in close proximity to this AFE.
- Tritium concentrations in samples from monitoring wells near, or hydraulically downgradient, of AFE-Dresden-4 may be impacted by tritium sources from other AFEs.
- There are 12 monitoring wells associated with this AFE. The groundwater samples contained tritium at concentrations ranging in concentration from less than the LLD of 200 pCi/L to 4,570 ± 208 pCi/L.
- Groundwater infiltration into the storm drain system is providing a pathway for tritiated groundwater to the Unit 1 Intake Canal.
- The Storm Drain System acts as a conduit for tritiated water rather than a source of tritium.

Potential Receptors

- Based on the results of this investigation[2] there is no current risk of exposure to radionuclides associated with licensed plant operations through any of the identified potential exposure pathways.

General Conclusions

- Based on the results of this investigation, tritium originating from the Station is not migrating off the Station property at detectable concentrations.
- Based on the results of this investigation, there are no known active releases into the groundwater at the Station.

[2] Using the LLD specified in this HIR.

9.0 RECOMMENDATIONS

The following presents CRA's recommendations for proposed activities to be completed at the Station.

9.1 FILL DATA GAPS

Based on the results of this hydrogeologic investigation, there are no data gaps remaining to support CRA's conclusions regarding the characterization of the groundwater regime and potential impacts from radionuclides at the Station.

9.2 GROUNDWATER MONITORING

Based on the information collected to date, CRA recommends that Exelon conduct periodic monitoring of selected sample locations.

10.0 REFERENCES

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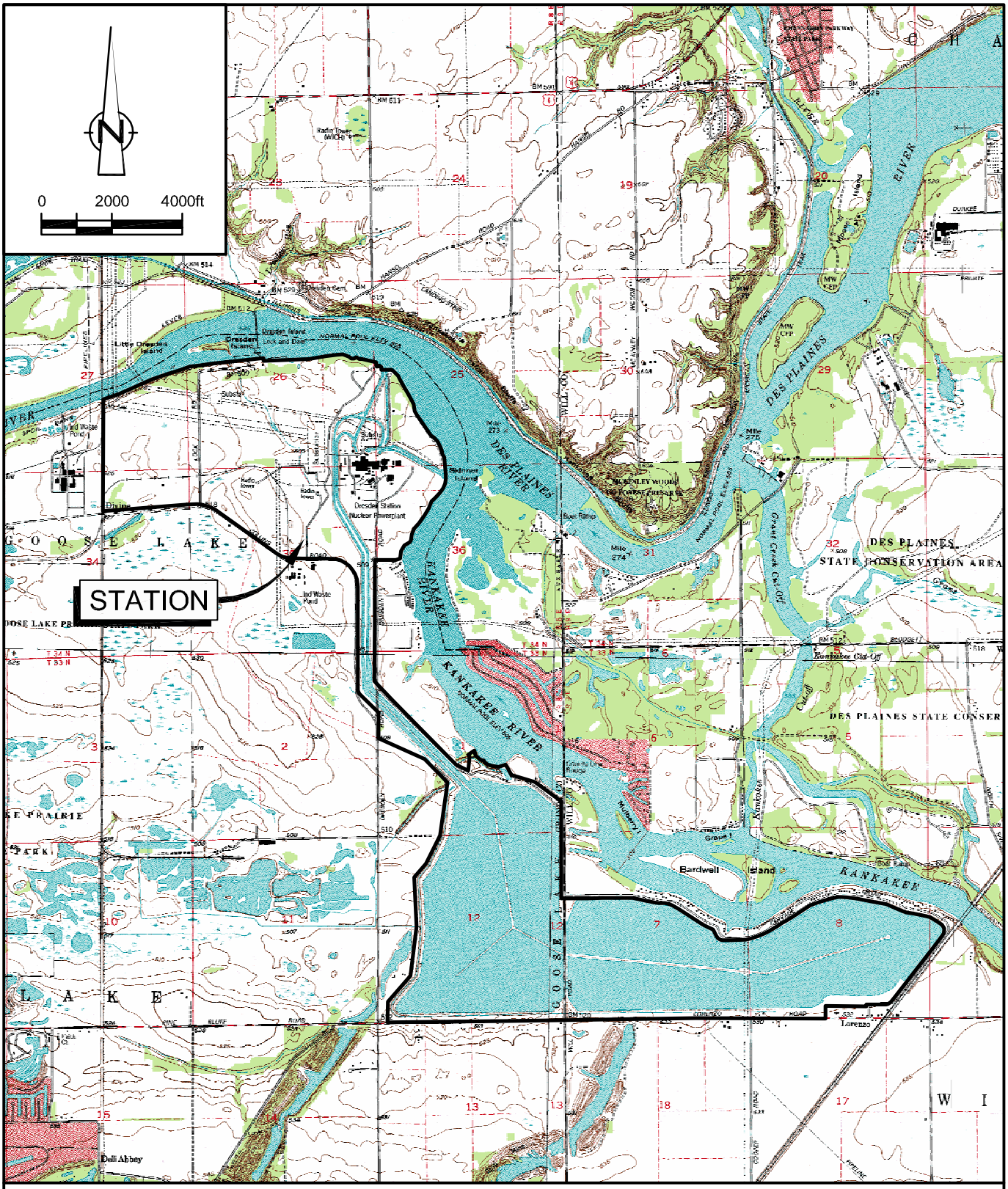
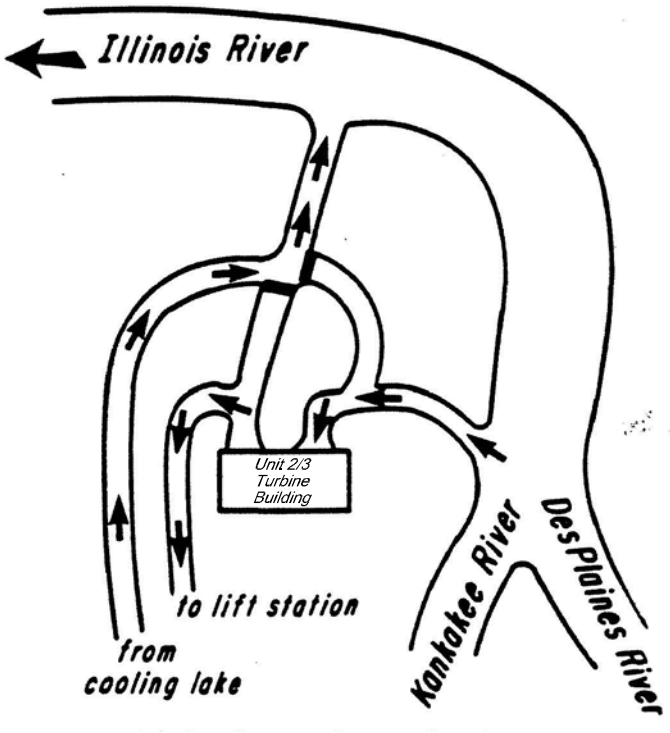


SOURCE: USGS QUADRANGLE MAP;
DRESDEN MOSAIC, ILLINOIS
1986 (EDITED: 1991)

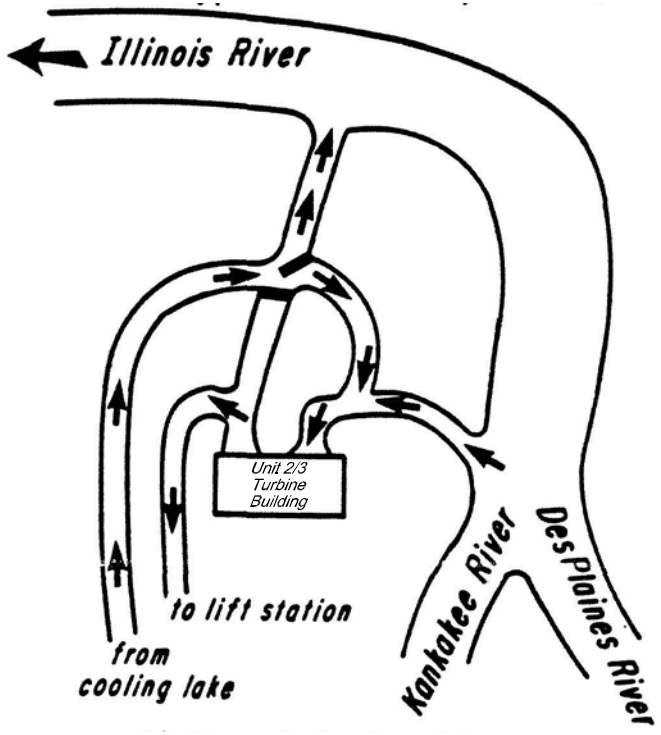
figure 1.1

STATION LOCATION MAP
DRESDEN GENERATING STATION
EXELON GENERATION COMPANY, LLC
Morris, Illinois

45136-23(015)GN-WA055 AUG 30/2006



INDIRECT OPEN CYCLE
(TYPICAL SUMMER OPERATION)



CLOSED CYCLE
(TYPICAL WINTER OPERATION)

figure 2.2

COOLING WATER FLOW DIAGRAM
UNITS 2 AND 3
DRESDEN GENERATING STATION
EXELON GENERATION COMPANY, LLC
Morris, Illinois

Exelon

SOURCE: DRESDEN STATION, UFSAR, REV. 6
JUNE 2005, FIGURE 2.4-2

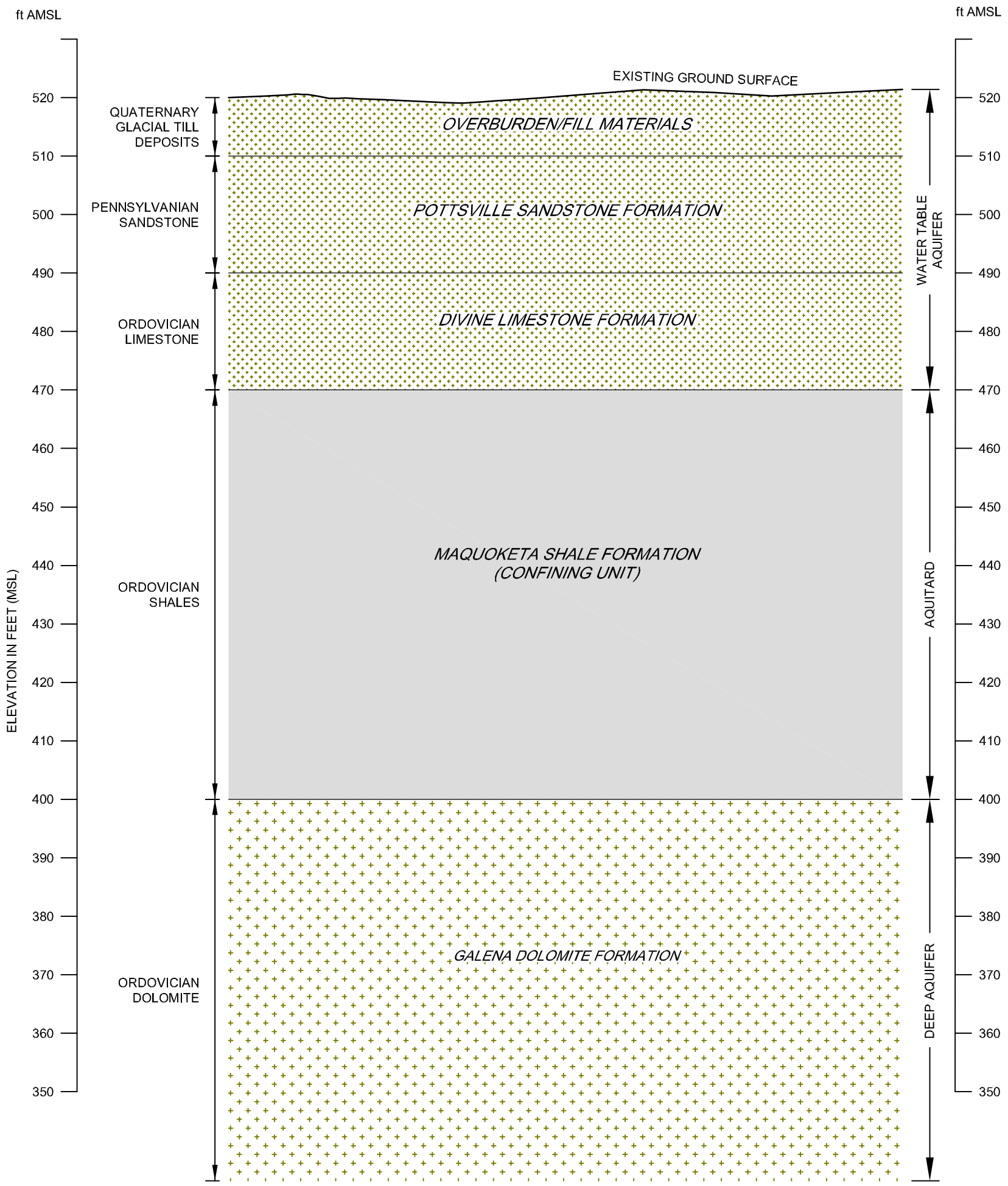
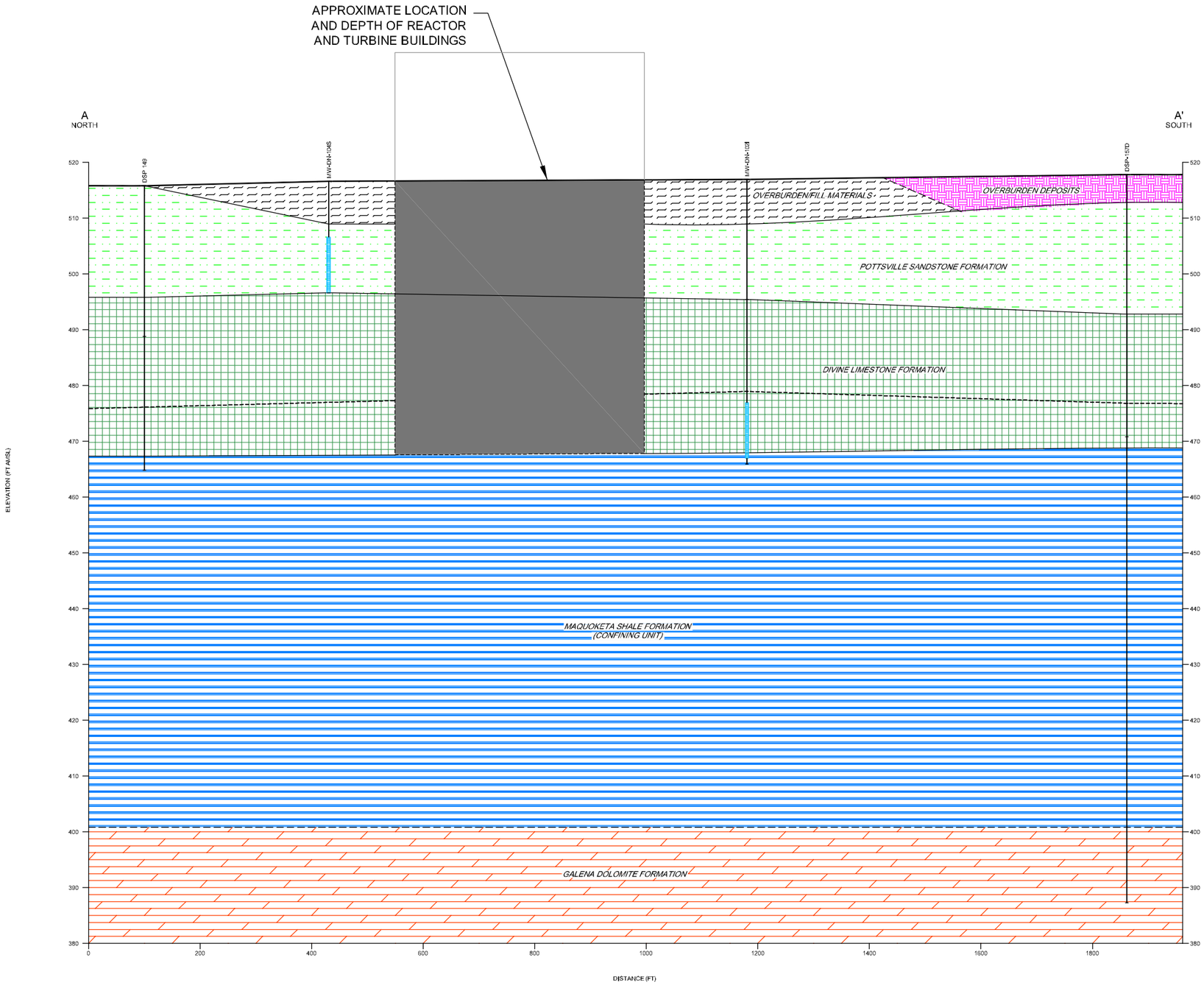


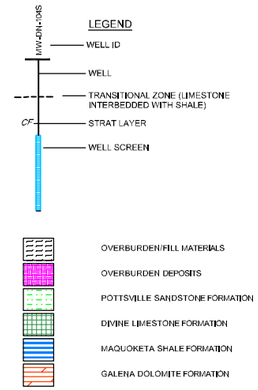
figure 2.3

REGIONAL GEOLOGIC CROSS-SECTION
DRESDEN GENERATING STATION
EXELON GENERATION COMPANY, LLC
Morris, Illinois

45136-23(015)GN-WA061 AUG 30/2006



NOTE: STRATIGRAPHIC DATA ARE BASED PRIMARILY ON THE MONITORING WELLS INSTALLED BY CRA IN 2006



SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

LOCAL GEOLOGIC CROSS-SECTION A-A'
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Exelon

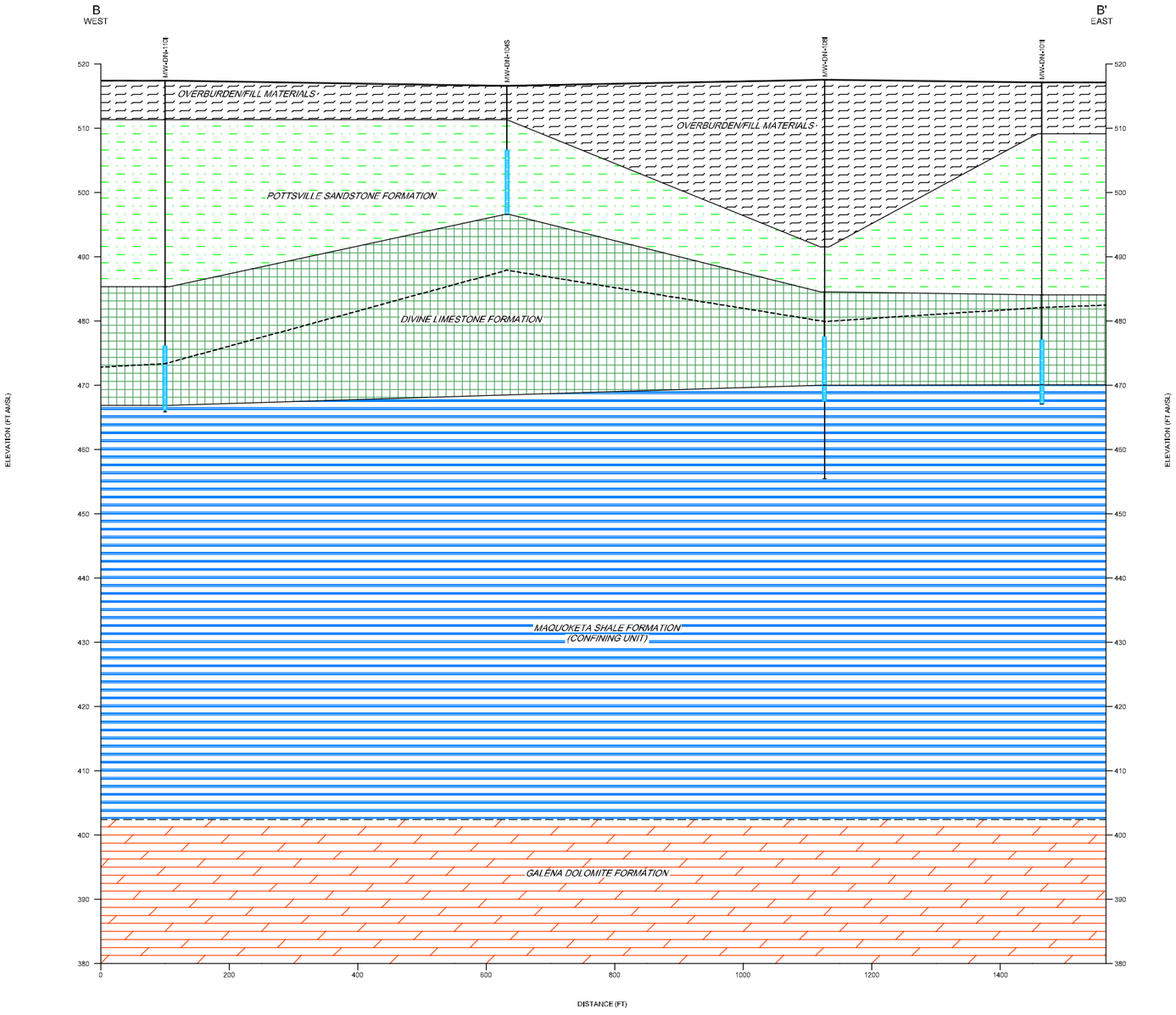
CONESTOGA-ROVERS & ASSOCIATES

Source References:
SDI CONSULTANTS LTD., ALTA/ACSM LAND TITLE SURVEY, DRESDEN NUCLEAR STATION, 9-15-00

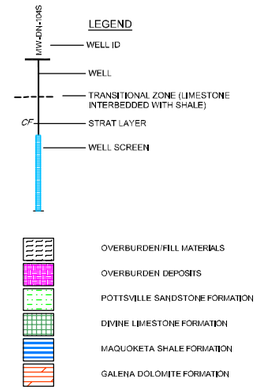
Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	AUGUST 2006	
Scale: AS SHOWN	Project No.: 45136-23	Report No.: 015	Drawing No.: figure 5.2

REVISION 1

45136-23(015)GN-WA063 AUG 31/2006



NOTE: STRATIGRAPHIC DATA ARE BASED PRIMARILY ON THE MONITORING WELLS INSTALLED BY CRA IN 2006



SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

LOCAL GEOLOGIC CROSS-SECTION B-B'
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Exelon

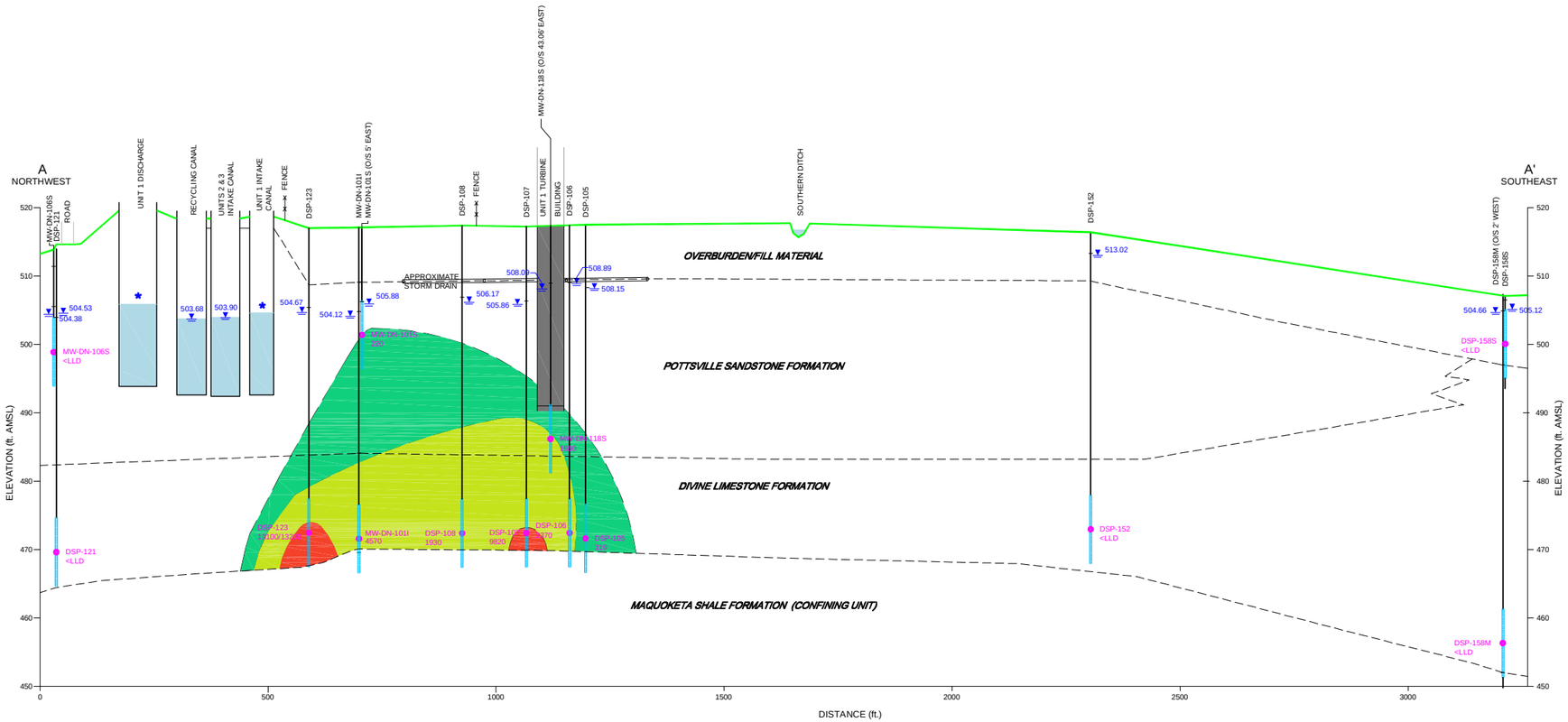
CONESTOGA-ROVERS & ASSOCIATES

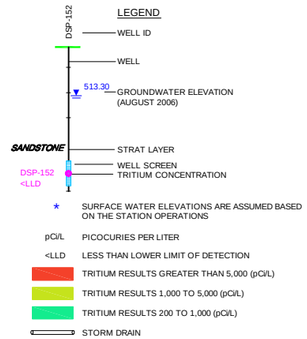
Source References:
SDI CONSULTANTS LTD., ALTA/ACSM LAND TITLE SURVEY, DRESDEN NUCLEAR STATION, 9-15-00

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	AUGUST 2006	
Scale: AS SHOWN	Project N°: 45136-23	Report N°: 015	Drawing N°: figure 5.3

REVISION 1

45136-23(015)GN-WA063 AUG 31/2006





SCALE VERIFICATION

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EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC PROFILE - A-A'
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

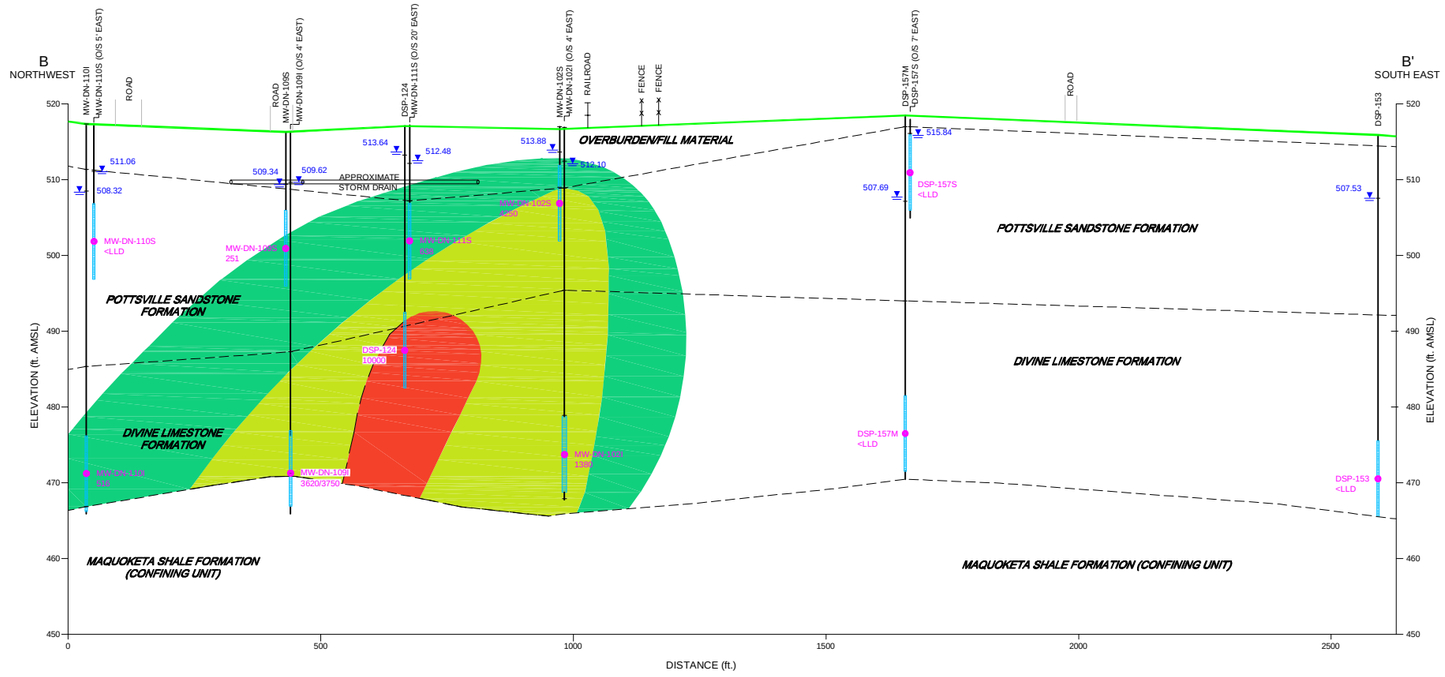
CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	D.CRUICKSHANK	AUGUST 2006	
Scale: AS SHOWN	Project N°: 45136-23	Report N°: 015	Drawing N°: figure 6.1

REVISION 1

45136-23(015)GN-WA064 AUG 31/2006



LEGEND

DSP-124 — WELL ID

WELL

513.24 — GROUNDWATER ELEVATION (AUGUST 2006)

SANDSTONE — STRAT LAYER

WELL SCREEN

DSP-124 10000 — TRITIUM CONCENTRATION

pCi/L — PICOCURIES PER LITER

<LLD — LESS THAN LOWER LIMIT OF DETECTION

TRITIUM RESULTS GREATER THAN 5,000 (pCi/L)

TRITIUM RESULTS 1,000 TO 5,000 (pCi/L)

TRITIUM RESULTS 200 TO 1,000 (pCi/L)

STORM DRAIN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC PROFILE - B-B'
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

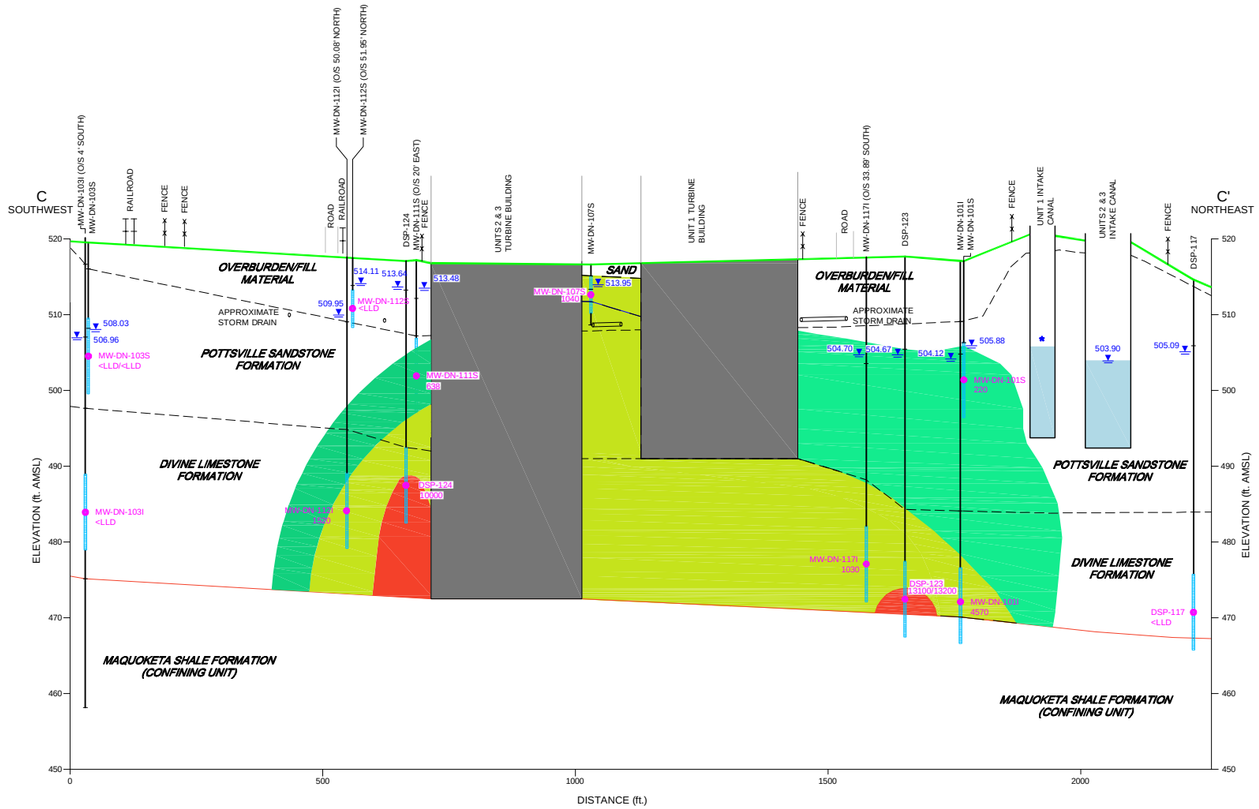
Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:			
Project Manager: S. QUIGLEY	Reviewed By: D.CRUICKSHANK	Date: AUGUST 2006	
Scale: AS SHOWN	Project N°: 45136-23	Report N°: 015	Drawing N°: figure 6.2

REVISION 1

45136-23(015)GN-WA065 AUG 31/2006



LEGEND

DSP-124 — WELL ID

WELL

513.24 — GROUNDWATER ELEVATION (AUGUST 2006)

SANDSTONE — STRAT LAYER

WELL SCREEN

DSP-124 10000 — TRITIUM CONCENTRATION

★ SURFACE WATER ELEVATIONS ARE ASSUMED BASED ON THE STATION OPERATIONS

pCi/L — PICOCURIES PER LITER

<LLD — LESS THAN LOWER LIMIT OF DETECTION

TRITIUM RESULTS GREATER THAN 5,000 (pCi/L)

TRITIUM RESULTS 1,000 TO 5,000 (pCi/L)

TRITIUM RESULTS 200 TO 1,000 (pCi/L)

STORM DRAIN

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC PROFILE - C-C'
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	D.CRUICKSHANK	AUGUST 2006	
Scale: AS SHOWN	Project N°: 45136-23	Report N°: 015	Drawing N°: figure 6.3

REVISION 1

45136-23(015)GN-WA066 AUG 31/2006

TABLE 4.1

SUMMARY OF MONITORING WELL INSTALLATION DETAILS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	X-coord. (UTM Coordinates [1])	Y-coord. (UTM Coordinates [1])	Installation Date	Surface Elevation (ft AMSL) [2]	Reference Elevation (ft AMSL)	Boring Total Depth (ft bgs) [3]	Screened Interval Top (ft bgs)	Screened Interval Bottom (ft bgs)	Screened Interval Top (ft AMSL)	Screened Interval Bottom (ft AMSL)	Well Construction	Hydrogeologic Unit Screened
MW-DN-101S	1292754.52	15035691.89	5/5/2006	517.10	520.30	20	10	20	507.10	497.10	2-inch PVC Screen	sandstone
MW-DN-101I	1292749.73	15035691.63	5/10/2006	517.08	520.48	50	40	50	477.08	467.08	2-inch PVC Screen	limestone
MW-DN-102S	1291970.66	15034981.38	5/8/2006	516.98	516.68	15	5	15	511.98	501.98	2-inch PVC Screen	sandstone
MW-DN-102I	1291974.96	15034980.06	5/10/2006	516.91	516.63	51	40	50	476.91	466.91	2-inch PVC Screen	limestone
MW-DN-103S	1291438.38	15034732.26	5/3/2006	519.53	522.12	20	10	20	509.53	499.53	2-inch PVC Screen	sandstone
MW-DN-103I	1291438.37	15034725.53	5/3/2006	520.13	522.72	62	31.2	41.2	488.93	478.93	2-inch PVC Screen	limestone
MW-DN-104S	1291936.65	15035728.47	5/9/2006	516.60	516.38	20	10	20	506.60	496.60	2-inch PVC Screen	sandstone
MW-DN-105S	1292920.89	15035163.96	5/5/2006	516.52	516.68	20	10	20	506.52	496.52	2-inch PVC Screen	sandstone
MW-DN-106S	1292788.38	15036048.97	5/3/2006	513.88	516.42	20	10	20	503.88	493.88	2-inch PVC Screen	sandstone
MW-DN-107S	1292169.66	15035276.73	5/15/2006	516.63	518.23	6.5	1.5	6.5	515.13	510.13	2-inch PVC Screen	overburden/fill material
MW-DN-108I	1292418.94	15035621.00	5/12/2006	517.49	517.14	62	40	50	477.49	467.49	2-inch PVC Screen	limestone
MW-DN-109S	1291668.32	15035430.95	5/9/2006	516.29	516.32	20	10	20	506.29	496.29	2-inch PVC Screen	sandstone
MW-DN-109I	1291673.27	15035431.11	5/9/2006	516.27	516.31	51	40	50	476.27	466.27	2-inch PVC Screen	limestone
MW-DN-110S	1291410.28	15035726.77	5/4/2006	517.16	517.28	20.2	10.2	20.2	506.96	496.96	2-inch PVC Screen	sandstone
MW-DN-110I	1291404.75	15035724.76	5/4/2006	517.34	517.41	51.5	41.2	51.2	476.14	466.14	2-inch PVC Screen	limestone
MW-DN-111S	1291825.08	15035252.07	5/4/2006	517.19	516.63	20	10	20	507.19	497.19	2-inch PVC Screen	sandstone
MW-DN-112S	1291687.438	15035163.73	7/25/2006	516.72	516.35	12.00	7.0	12.0	509.72	504.72	2-inch PVC Screen	sandstone
MW-DN-112I	1291687.61	15035160.79	7/27/2006	516.56	516.22	41.5	31.5	41.5	485.06	475.06	2-inch PVC Screen	limestone
MW-DN-113S	1292128.616	15034829.18	7/26/2006	516.36	516.13	11.0	6.0	11.0	510.36	505.36	2-inch PVC Screen	sandstone
MW-DN-113I	1292133.339	15034829.09	7/26/2006	516.33	516.13	48.0	38.0	48.0	478.33	468.33	2-inch PVC Screen	limestone and shale
MW-DN-114S	1292267.724	15035256.93	7/27/2006	516.76	516.31	42.0	31.0	41.0	485.76	475.76	2-inch PVC Screen	sandstone
MW-DN-114I	1292264.824	15035231.87	7/31/2006	519.71	519.97	53.0	48.0	53.0	471.71	466.71	2-inch PVC Screen	limestone and shale
MW-DN-115S	1292438.135	15035151.31	7/31/2006	516.89	516.58	30.0	25.0	30.0	491.89	486.89	2-inch PVC Screen	sandstone
MW-DN-115I	1292441.016	15035151.25	7/28/2006	516.88	516.63	63.0	46.0	56.0	470.88	460.88	2-inch PVC Screen	limestone
MW-DN-116S	1292386.958	15035670.71	7/26/2006	517.40	517.11	28.0	23.0	28.0	494.40	489.40	2-inch PVC Screen	sandstone
MW-DN-116I	1292378.009	15035670.4	7/26/2006	517.30	516.84	49.0	35.5	45.5	481.80	471.80	2-inch PVC Screen	limestone
MW-DN-117I	1292547.509	15035558.2	7/26/2006	517.75	518.22	47.3	37.0	47.0	480.75	470.75	2-inch PVC Screen	limestone
MW-DN-118S	1292739.289	15035265.24	7/26/2006	516.38	516.13	35.0	23.0	33.0	493.38	483.38	2-inch PVC Screen	sandstone
MW-DN-119S	1292903.761	15035634.86	7/27/2006	516.52	516.16	21.0	16.0	21.0	500.52	495.52	2-inch PVC Screen	sandstone
MW-DN-119I	1292898.723	15035634.1	7/27/2006	518.45	517.97	43.0	32.0	42.0	486.45	476.45	2-inch PVC Screen	limestone
MW-DN-120S	1293830.442	15035510.63	7/25/2006	511.85	513.93	38.0	28.0	38.0	483.85	473.85	2-inch PVC Screen	sandstone
MW-DN-120I	1293828.088	15035505.4	7/25/2006	511.59	513.89	58.0	47.5	57.5	464.09	454.09	2-inch PVC Screen	limestone and shale

SUMMARY OF MONITORING WELL INSTALLATION DETAILS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	X-coord. (UTM Coordinates [1])	Y-coord. (UTM Coordinates [1])	Installation Date	Surface Elevation (ft AMSL) [2]	Reference Elevation (ft AMSL)	Boring Total Depth (ft bgs) [3]	Screened Interval Top (ft bgs)	Screened Interval Bottom (ft bgs)	Screened Interval Top (ft AMSL)	Screened Interval Bottom (ft AMSL)	Well Construction	Hydrogeologic Unit Screened
MW-DN-121S	1291006.629	15035519.61	7/24/2006	515.93	518.63	26.9	14.5	24.5	501.43	491.43	2-inch PVC Screen	sandstone
MW-DN-122S	1290479.543	15032860.49	7/24/2006	525.72	528.43	12.5	6.5	11.5	519.22	514.22	2-inch PVC Screen	sandstone
MW-DN-122I	1290479.679	15032865.52	7/24/2006	525.53	528.18	43.0	32.8	42.8	492.73	482.73	2-inch PVC Screen	limestone and shale
MW-DN-123S	1291955.928	15031851.29	7/25/2006	512.98	515.03	20.0	14.0	19.0	498.98	493.98	2-inch PVC Screen	limestone
MW-DN-123I	1291955.16	15031842.23	7/25/2006	512.71	516.65	44.5	34.0	44.0	478.71	468.71	2-inch PVC Screen	limestone

Notes:

(1) Universal Transverse Mercator (UTM), Zone 16, NAVD 88, in feet
(2) ft AMSL - feet above mean sea level
(3) ft bgs - feet below ground surface
PVC polyvinyl chloride

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-101S	5/12/2006	1.57	1.5	7.17	97	11.3	48.5	brown
			3.0	7.15	96	11.4	32.1	brown
			4.5	7.16	95	11.7	13.2	brown
					Well dry at 5 gallons			
			6.0	7.18	95	10.9	264.0	gray
			7.5	7.16	95	11.5	1.1	gray
					Well dry at 7.5 gallons			
			9.0	7.83	761	13.5	174.0	gray
			10.5	7.87	711	13.3	142.0	gray
			12.0	7.94	678	14.0	69.0	gray
					Well dry at 12 gallons			
MW-DN-101I	5/15/2006	6.07	6	7.18	107	15.5	44.6	gray
					Well dry			
			12	7.54	1033	14.9	2.2	gray
			18	7.69	1025	15.0	34.2	gray
			24	7.76	955	14.9	24.3	gray
			30	7.65	982	15.1	120.9	gray
			36	7.52	924	15.4	251.0	gray
			42	7.61	861	15.6	74.3	gray
			48	7.67	850	16.2	28.6	gray
			54	7.36	847	15.8	54.7	clear
			60	7.47	839	16.1	10.3	clear

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-102S	5/15/2006	1.97	2	7.14	1378	18.4	0.4	brown
			4	7.01	1356	18.6	0.1	brown
					Well dry			
			6	7.20	1245	18.0	1.1	brown
			8	7.20	1249	18.2	0.8	brown
					Well dry			
			10	7.29	1100	19.1	290.0	brown
			12	7.15	1152	18.5	9.6	brown
					Well dry			
			14	7.35	1101	18.5	127.0	brown
			16	7.16	1083	18.4	29.0	brown
					Well dry			
MW-DN-102I	5/15/2006	6.71	7	7.91	1110	18.2	34.4	gray
					Well dry			
			14	8.12	884	18.4	214.0	gray
					Well dry			
			21	7.90	831	17.7	15.4	gray
					Well dry			
MW-DN-103S	5/16/2006	1.7	1.7	7.03	NA[5]	13.3	864	brown
			2.4	-	-	-	-	-
			4.1	7.08	NA[5]	13.0	446	brown
			4.4	-	-	-	-	-
			6.1	6.86	NA[5]	13.2	107	brown
			6.3	-	-	-	-	-

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-103I	5/16/2006	4.7	4.7	7.15	NA[5]	14.1	>999	brown, sulfur odor
			9.4	7.07	NA[5]	14.6	>999	brown, sulfur odor
			14.1	7.17	NA[5]	15.0	>999	brown, sulfur odor
			18.5	7.1	NA[5]	14.5	258	brown, sulfur odor
			23.2	7.12	NA[5]	14.5	178	brown, sulfur odor
			27.9	7.03	NA[5]	14.4	55.9	brown, sulfur odor
			32.6	7.05	NA[5]	14.4	58.1	brown, sulfur odor
			37.3	7.09	NA[5]	14.4	102	brown, sulfur odor
			41.9	7.07	NA[5]	14.4	111	brown, sulfur odor
			46.2	7.04	NA[5]	14.4	96	brown, sulfur odor
MW-DN-104S	5/15/2006	2.2	2.2	6.40	362	22.4	>999	brown
			4.5	6.38	368	22.6	>999	brown
					Well dry			
			6.7	7.04	227	23.2	>999	gray
			8.3	6.41	176	23.0	>999	gray
					Well dry			
			10.5	6.74	163	22.5	>999	gray
					Well dry			
MW-DN-105S	5/15/2006 #	2.7	2.7	7.8	405	15.2	685	brown
			4.0	-	-	-	-	brown
					Well dry			
			6.7	7.28	182	14.1	>999	gray
					Well dry			
			9.4	7.26	176	14.0	>999	gray
					Well dry			

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-106S	5/16/2006	2.08	2.1	7.01	175.6	12.7	>999	brown
			3.2	-	-	-	-	-
					Well dry			
			5.3	6.95	157.9	12.6	>999	brown
			6.5	-	-	-	-	-
					Well dry			
			8.6	6.95	NA[5]	12.3	>999	brown
			9.3	-	-	-	-	-
					Well dry			
MW-DN-107S	5/15/2006	0.26	0.25	7.93	362	26.7	>999	brown
			0.50	7.90	368	28.5	>999	brown
			0.75	7.88	360	28.6	>999	brown
			1.00	7.87	352	28.8	>999	brown
			1.25	7.90	348	29.0	>999	brown
			1.50	7.92	348	28.8	>999	brown
			1.75	7.93	344	28.8	>999	brown
			2.00	7.94	340	28.8	>999	brown
			2.25	7.96	335	28.8	>999	brown
			2.50	7.98	331	28.8	>999	brown
MW-DN-108I	5/16/2006	1.49	1.5	7.84	734	15.6	69.8	-
			3.0	7.88	730	15.5	71.1	-
			4.5	7.85	721	15.5	76.8	-
			6.0	7.87	731	15.4	88.0	-
			7.5	7.86	722	15.8	105.9	-
			9.0	7.90	724	16.2	101.6	-
			10.5	7.88	726	15.4	77.4	-
			12.0	7.91	726	15.5	76.2	-
			13.5	7.88	710	15.4	75.4	-
			15.0	7.90	721	15.7	77.7	-

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-109S	5/12/2006	2.17	2.2	7.17	131.8	13.2	80.9	brown
			4.4	7.13	134.6	13.7	77.2	brown
			6.6	7.12	138.8	14.0	73.6	brown
			8.8	7.11	140.7	14.1	25.6	brown
			11.0	7.11	144.5	14.4	13.1	brown
			13.2	7.11	142.9	14.0	193.0	brown
			15.4	7.12	143.7	14.0	157.9	brown
			17.6	7.13	141.9	13.8	182.9	brown
			19.8	7.12	145.0	14.2	174.9	brown
			24.0	7.13	144.2	13.9	47.1	brown
MW-DN-109I	5/11/2006	7.09	7.0	7.82	161.1	15.7	38.0	brown
			14.0	7.93	164.0	16.1	0.1	brown
					Well dry after 2 volumes			
			21.0	7.17	127.5	15.0	164.4	brown
			28.0	7.22	145.9	14.9	17.2	brown
					Well dry after 2 volumes			
			35.0	7.18	113.0	15.0	172.5	brown
					Well dry after 1 volume			
MW-DN-110S	5/11/2006	2.44	2.5	6.84	199.9	13.8	2.0	gray
			5.0	6.86	189.7	14.0	0.4	gray
			8.0	6.97	195.5	14.0	46.8	gray
					Well dry			
			10.5	7.08	143.2	13.8	265.0	gray
			13.0	7.11	151.0	14.4	16.1	gray
					Well running dry			
			18.0	7.02	157.2	13.7	52.0	gray
			20.5	7.11	147.4	13.5	228.0	gray
					Well dry			

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-110I	5/15/2006	6.87	7	7.60	493	15.9	2.5	gray
					Well dry			
			14	7.40	133.2	16.3	285.0	gray
					Well dry			
			21	7.11	170.1	14.2	265.0	gray
					Well dry			
MW-DN-111S	5/15/2006	2.36	2.4	6.42	143	17.4	>999	brown, petroleum odor, slight sheen
			5.0	6.38	137	17.3	>999	brown, petroleum odor, slight sheen
			7.5	7.65	145	17.3	>999	brown, petroleum odor, slight sheen
			10.0	7.28	125	17.8	>999	brown, petroleum odor, slight sheen
			12.5	7.17	115	18.2	>999	brown, petroleum odor, slight sheen
			15.0	7.07	111	18.2	>999	brown, petroleum odor, slight sheen
			17.4	7.61	122	17.0	>999	brown, petroleum odor, slight sheen
MW-DN-112S	7/25/2006	1.44	0	6.76	1125			
			1.5	7.21	1196			
			3.0	7.13	1158			
				Well dry at 4.5 gallons				
			4.5	6.94	1258			
			6.0	7.02	1294			
			7.5	Well dry at 8 gallons				
			8.0	7.02	1200			
			9.5	7.06	1244			
			11.0	7.12	1219			
				Well dry at 11 gallons				

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-112I	7/26/2006	5.98	0	7.53	1,086			
			6.0	7.59	1002			
					Well dry at 10 gallons			
			13.0	7.21	1030	18.9		silty gray
			15.0	7.42	1027	17.3		silty, brown/gray
			16.0	7.47	1080	18.2		silty, brown/gray
					Well dry at 16 gallons			
			21.0	7.49	849	17.78		silty, brown/gray
			23.0	7.53	1007	17.6		silty, gray
					Well dry at 23 gallons			
MW-DN-113S	7/25/2006	1.36	0.0	7.17	1068			
			1.5	7.09	1036			
					Well dry at 3.5 gallons			
			3.5	7.02	1067			
			5.0	7.20	1075			
					Well dry at 5.5 gallons			
			5.5	6.88	1031			
			7.0	6.45	1008			
					Well dry at 7.75 gallons			
MW-DN-113I	7/25/2006	7.08	7.25	7.15	1107			
					Well dry at 10 gallons			
			10.0	7.27	1180			
			17.25	7.53	1069			
			21.0	7.47	1102			
					Well dry at 21 gallons			
			28.25	7.47	890			
			35.5	7.43	1038			

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-114S	7/27/2006	5.1	10.00	7.04	925	22.4		silty/brownish gray/slight odor
					Well dry			
			17.5	7.06	867	21.5		cloudy, brownish gray
					Well dry			
			27.5	7.05	895	21.6		cloudy, brownish gray
					Well dry			
MW-DN-114I	7/31/2006	7.2	15.0	6.77	1570	20.2		cloudy, gray, sulfur odor
			30.0	6.82	1568	20.0		clearing, sulfur odor
			45.0	6.80	1560	20.1		slightly cloudy, sulfur odor
			60.0	6.78	1550	19.9		clear, sulfur odor
			80.0	6.79	1552	20		clear, sulfur odor
MW-DN-115S	7/31/2006	3.7	8.0	6.78	1000	20.3		silty gray
					Well dry at 10 gallons			
			16.0	6.85	1030	20.8		silty gray
					Well dry at 18 gallons			
			24.0	6.79	1035	20.8		silty gray
					Well dry at 26 gallons			
MW-DN-115I	7/28/2006	7.72	20.0	8.72	884	19.3		cloudy, gray, sulfur odor
			40.0	8.10	1010	19.5		cloudy, gray, sulfur odor
			60.0	7.63	1244	19.8		clearing, sulfur odor
			70.0	7.68	1252	19.9		clearing, sulfur odor
			80.0	7.68	1251	19.9		clearing, sulfur odor

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-116S	7/25/2006	2.34	0.0	6.8	862			
			2.5	6.94	847			
					Well dry at 4.5 gallons			
			4.5	7.38	848			
			7.0	7.17	816			
					Well dry at 8.5 gallons			
			8.5	7.10	806			
			11.0	7.19	803			
					Well dry at 12.5 gallons			
MW-DN-116I	7/26/2006	5.2	5.25	6.97	1210	17		Very silty, brown, sulfur odor
			10.50	6.94	1160	15.9		Very silty, brown, sulfur odor
			15.75	6.9	1190	16.2		Very silty, brown, sulfur odor
			21.00	6.92	1190	16.2		less silt, light gray, sulfur odor
			26.25	6.94	1170	16		less silt, light gray, sulfur odor
			31.50	6.93	1160	16.1		Translucent, sulfur odor
			36.75	6.93	1150	15.9		Translucent, sulfur odor
			42.00	6.93	1150	15.8		Translucent, sulfur odor
			47.25	6.94	1150	15.8		Translucent, sulfur odor
			52.50	6.93	1120	16		Translucent, sulfur odor
MW-DN-117I	7/26/2006	4.9	5.0	7.13	648	15.2		very silty, gray
			10.0	6.96	649	15.2		very silty, gray
			15.0	6.9	654	15.3		less silty, light gray
			20.0	6.98	682	15.7		less silty, light gray
			25.0	6.97	668	15.3		less silty, light gray
			30.0	6.89	707	15.2		less silty, light gray
			35.0	6.97	673	15.1		less silty, light gray
			40.0	6.93	662	15.5		less silty, light gray
			45.0	7.00	651	16.5		translucent, little sediment, no color
			50.0	7.02	663	16.2		translucent, little sediment, no color

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-118S	7/26/2006	3.7	3.75	7.05	970	19.2		opaque, light brown
			7.5	6.96	980	18.8		opaque, light brown
			11.25	7.01	970	18.3		opaque, light brown
			15	7.01	960	17.8		slightly opaque, no color
			18.75	6.95	887	18.2		slightly opaque, no color
			22.5	6.97	950	17.5		slightly opaque, no color
			26.25	6.96	882	17.5		translucent, no color
			30	6.98	874	17.2		translucent, no color
			33.75	6.97	920	17.2		translucent, no color
MW-DN-119S	7/27/2006	1.8			Well dry at 2 gallons			
			3	6.97	793	18.9		cloudy, gray
			4	6.92	831	18.4		cloudy, gray
					Well dry at 4 gallons			
			6	6.91	835	18.3		cloudy, gray
					Well dry at 6 gallons			
MW-DN-119I	7/27/2006	5	5	7.05	195	16.2		silty, gray
			10	7.05	190	16.3		silty, gray
			20	7.13	190	16.7		silty, gray
			30	7.06	193	16.5		cloudy, gray, clearing
			40	7.08	194	16.2		clear
			50	7.08	195	16.3		clear

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-120S	7/25/2006	5	5.0	6.43	1850	15.8		silty, opaque, brown
			10.0	6.44	1950	14.6		silty, opaque, brown
			15.0	6.43	1970	13.9		silty, opaque, brown
			20.0	6.46	1960	14.5		silty, opaque, brown
			25.0	6.49	1890	14.2		silty, opaque, brown
					Well dry at 30 gallons			
			30.0	6.44	1960	14.5		translucent, light gray
			35.0	6.44	1970	14.7		translucent, light gray
			40.0	6.43	1970	14.3		translucent, light gray
			45.0	6.43	1980	14.3		translucent, light gray
			50.0	6.43	1950	15.5		translucent, light gray
MW-DN-120I	7/25/2006	8.23	8.25	7.06	1190	15.5		turbid, gray
			16.50	6.88	1210	14.7		opaque, light gray
			24.75	6.81	1220	15.1		opaque, light gray
			33.00	6.73	1230	14.4		opaque, light gray
			41.25	6.61	1230	14.1		translucent, very light gray
			49.50	6.73	1230	14.6		translucent, very light gray
			57.75	6.71	1220	14.4		translucent, no color
			66.00	6.73	1230	14.2		translucent, no color
			74.25	6.74	1230	14.4		translucent, no color
			82.50	6.72	1230	14.2		translucent, no color
			90.75	6.71	1240	13.8		translucent, no color

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-121S	7/24/2006	3.1	3.0	6.67	1300	17.2		turbid, gray
			6.0	6.61	1210	16.3		turbid, light gray
			9.0	6.57	1220	16.2		translucent, very light gray
			12.0	6.6	1220	15.8		translucent, very light gray
			15.0	6.55	1250	16.1		translucent, no color
			18.0	6.46	1230	16.1		translucent, no color
			21	6.5	1230	15.9		translucent, no color
			24	6.3	1260	16.7		translucent, no color
			27	6.4	1250	15.6		translucent, no color
			30	6.4	1240	15.6		translucent, no color
			33	6.4	1250	15.9		translucent, no color
MW-DN-122S	7/24/2006	0.9	1.0	7.79	960	18.1		very turbid, light brown
				Well dry				
			1.0	7.7	1000	19.0		very turbid, light brown
				Well dry				
			1.0	7.6	754	24.7		very turbid, light brown
				Well dry				
MW-DN-122I	7/24/2006	5.3	5.0	7.78	731	18.7		very turbid, gray
				Well dry				
			2.0	7.74	844	18.8		very turbid, gray
				Well dry				
			2.0	***	***	***		
MW-DN-123S	7/25/2006			Well was dry; therefore, it was not developed.				

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)* [1]	*Conductivity (µS/cm)* [2]	*Temperature (°C)* [3]	*Turbidity (NTU)* [4]	*Observations*
MW-DN-123I	7/25/2006	6.2	6.25	7.29	499	18.5		translucent, no color
			12.50	7.16	498	17.2		opaque, light gray
			18.75	7.06	475	16.4		opaque, light gray
			25.00	7.01	474	17.0		translucent, no color
			31.25	6.94	472	16.2		translucent, no color
			37.50	6.94	470	16.0		translucent, no color
			43.75	6.93	469	16.0		translucent, no color
			50.00	6.88	466	16.0		translucent, no color
			56.25	6.9	472	15.8		translucent, no color
			62.50	6.85	468	16.4		translucent, no color

Notes:

(1) Std. Units - standard units
(2) µS/cm - microSiemens per centimeter
(3) degrees Celsius
(4) NTU - nephelometric turbidity units
(5) Conductivity not available due to instrument calibration error. Removed minimum of 10 gallons or purge dry 3 times.

SUMMARY OF GROUNDWATER ELEVATIONS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	Top of Casing Elevation (ft AMSL) [1]	Surface Elevation	Total Depth (ft BTOC) [2]	5/22/2006		8/7/2006	
				Depth to Water (ft BTOC)	Groundwater Elevation (ft AMSL)	Depth to Water (ft BTOC)	Groundwater Elevation (ft AMSL)
Shallow Wells							
DSP-157S	521.54	517.93	NA	5.47	516.07	5.70	515.84
DSP-158S	510.78	507.07	NA	4.27	506.51	5.66	505.12
DSP-159S	519.41	515.61	18.61	NM	NM	10.47	508.94
MW-DN-101S	520.30	517.10	23.90	14.03	506.27	14.42	505.88
MW-DN-102S	516.68	516.98	14.80	3.05	513.63	2.80	513.88
MW-DN-103S	522.12	519.53	NA	13.93	508.19	14.09	508.03
MW-DN-104S	516.61	516.60	20.05	6.73	509.88	7.66	508.95
MW-DN-105S	516.68	516.52	20.00	4.35	512.33	4.71	511.97
MW-DN 106S	516.42	513.88	NA	10.86	505.56	12.06	504.36
MW-DN-107S	518.23	516.63	6.31	4.88	513.35	4.28	513.95
MW-DN-109S	516.32	516.29	20.40	6.94	509.38	6.98	509.34
MW-DN-110S	517.28	517.16	20.43	6.21	511.07	6.22	511.06
MW-DN-111S	517.32	517.19	20.41	5.20	512.12	4.84	512.48
MW-DN-112S	516.35	516.72	12.00	N/A	N/A	2.24	514.11
MW-DN-113S	516.13	516.36	11.05	N/A	N/A	2.53	513.60
MW-DN-114S	516.31	516.76	42.00	N/A	N/A	8.61	507.70
MW-DN-115S	516.58	516.89	29.92	N/A	N/A	7.36	509.22
MW-DN-116S	517.11	517.40	27.41	N/A	N/A	12.83	504.28
MW-DN-118S	516.13	516.38	31.19	N/A	N/A	8.04	508.09
MW-DN-119S	516.16	516.52	20.73	N/A	N/A	9.69	506.47
MW-DN-120S	513.93	511.85	40.36	N/A	N/A	9.71	504.22
MW-DN-121S	518.63	515.93	26.85	N/A	N/A	7.32	511.31
MW-DN-122S	528.43	525.72	14.35	N/A	N/A	7.89	520.54
MW-DN-123S	515.03	512.98	20.89	N/A	N/A	20.18	494.85
Intermediate Wells							
DSP-105	518.44	517.50	51.80	10.15	508.29	10.29	508.15
DSP-106	518.44	517.42	51.00	9.37	509.07	9.55	508.89
DSP-107	519.53	517.23	52.10	13.18	506.35	13.67	505.86
DSP-108	519.49	517.37	52.10	12.58	506.91	13.32	506.17
DSP-117	517.52	514.63	>100.00	11.61	505.91	12.43	505.09
DSP-118	519.83	517.21	51.90	7.53	512.30	7.94	511.89
DSP-121	516.83	513.95	52.20	23.03	493.80	12.30	504.53
DSP-122	519.67	516.76	37.37	10.43	509.24	10.94	508.73
DSP-123	520.13	517.00	52.68	14.71	505.42	15.46	504.67
DSP-124	519.81	517.08	37.33	6.57	513.24	6.17	513.64
DSP-125	519.76	516.71	37.60	6.56	513.20	6.65	513.11
DSP-126	524.90	522.39	55.70	16.10	508.80	16.26	508.64
DSP-127	519.88	516.96	47.70	10.67	509.21	10.99	508.89
DSP-147	523.37	520.89	52.00	15.88	507.49	22.27	501.10
DSP-148	520.78	518.29	51.50	13.20	507.58	13.68	507.10
DSP-149R	518.29	515.80	52.42	12.96	505.33	13.65	504.64
DSP-150	518.31	515.45	51.50	10.10	508.21	10.43	507.88
DSP-151	519.17	516.43	51.90	7.26	511.91	7.56	511.61
DSP-152	519.26	516.40	51.30	5.96	513.30	6.24	513.02

TABLE 4.3

SUMMARY OF GROUNDWATER ELEVATIONS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	Top of Casing Elevation (ft AMSL) [1]	Surface Elevation	Total Depth (ft BTOC) [2]	5/22/2006 Depth to Water (ft BTOC)	5/22/2006 Groundwater Elevation (ft AMSL)	8/7/2006 Depth to Water (ft BTOC)	8/7/2006 Groundwater Elevation (ft AMSL)
Intermediate Wells (cont'd.)							
DSP-153	518.57	515.89	NA	11.05	507.52	11.04	507.53
DSP-154	514.70	512.17	52.44	8.15	506.55	7.99	506.71
DSP-155	518.53	515.47	42.20	11.74	506.79	NM	NM
DSP-156	518.14	515.17	52.30	12.78	505.36	13.50	504.64
DSP-157M	521.80	517.81	NA	14.64	507.16	14.11	507.69
DSP-158M	510.64	507.32	NA	5.72	504.92	5.98	504.66
DSP-159M	519.37	515.57	NA	12.84	506.53	12.85	506.52
MW-DN-101I	520.48	517.08	53.90	15.71	504.77	16.36	504.12
MW-DN-102I	516.63	516.91	48.90	4.21	512.42	4.53	512.10
MW-DN-103I	522.72	520.13	NA	15.68	507.04	15.76	506.96
MW-DN-108I	517.14	517.49	50.20	12.51	504.63	12.86	504.28
MW-DN-109I	516.31	516.27	50.40	6.68	509.63	6.69	509.62
MW-DN-110I	517.41	517.34	51.50	8.90	508.51	9.09	508.32
MW-DN-112I	516.22	516.56	41.40	N/A	N/A	6.27	509.95
MW-DN-113I	516.13	516.33	47.35	N/A	N/A	3.39	512.74
MW-DN-114I	519.97	519.71	52.85	N/A	N/A	8.43	511.54
MW-DN-115I	516.63	516.88	55.70	N/A	N/A	7.17	509.46
MW-DN-116I	516.84	517.30	45.57	N/A	N/A	13.05	503.79
MW-DN-117I	518.22	517.75	47.28	N/A	N/A	13.52	504.70
MW-DN-119I	517.97	518.45	42.36	N/A	N/A	11.59	506.38
MW-DN-120I	513.89	511.59	60.55	N/A	N/A	9.75	504.14
MW-DN-122I	528.18	525.53	46.01	N/A	N/A	12.57	515.61
MW-DN-123I	515.65	512.71	46.40	N/A	N/A	7.92	507.73
Deep Wells							
DSP-119	517.72 [4]	NA	NA	<150.00	<367.72	>100	---
DSP-157D	521.86	NA	NA	139.30	382.56	>100	---
DSP-158D	510.39	NA	NA	138.18	372.21	>100	---
DSP-159D		NA	NA			>100	---

Notes:

(1) ft AMSL - feet above mean sea level
(2) ft BTOC - feet below top of casing
(3) NA - Surface elevation not available
(4) This is top of casing. The riser was below the casing and not accessible

TABLE 4.4

SUMMARY OF SURFACE WATER ELEVATIONS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Surface Water Location	*Reference Elevation (ft AMSL)* [1]	*May 22, 2006*		*August 7, 2006*	
		Depth to Water (ft below Reference)	*Surface Water Elevation (ft AMSL)*	*Depth to Water (ft below Reference)*	*Surface Water Elevation (ft AMSL)*
SW-DN-101	514.14	9.73	504.41	10.24	503.90
SW-DN-102	517.79	13.28	504.51	13.14	504.65
SW-DN-103	519.58	14.99	504.59	16.17	503.41
SW-DN-104	519.15	NM	NM	11.09	508.06
SW-DN-105	519.24	NM	NM	12.36	506.88
SW-DN-106	529.63	7.23	522.40	7.27	522.36
SW-DN-107	529.25	7.24	522.01	7.09	522.16

Note:

(1) ft AMSL - feet above mean sea level
NM No depth-to-water measurement.

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
DSP-105	05/23/2006	11:15	250	7.35	18.98	1039	-30.1	5.10	2.37	NM
		11:20	250	7.29	18.88	1037	-30	4.52	2.02	NM
		11:25	250	7.31	18.61	1039	-30	4.79	2.16	NM
DSP-106	05/23/2006	12:15	250	7.51	17.36	795	-26.1	5.08	1.92	NM
		12:20	250	7.49	17.37	794	-25.7	4.99	1.49	NM
		12:25	250	7.49	17.33	794	-25.7	4.97	1.29	NM
DSP-107	05/23/2006	13:30	150	7.19	16.57	830	-30.7	0.65	3.20	NM
		13:35	150	7.16	16.58	831	-30.7	0.49	2.52	NM
		13:40	150	7.15	16.83	830	-30.5	0.40	2.36	NM
DSP-108	05/24/2006	15:30	60	7.21	19.64	872	-22.6	1.97	3.71	NM
		15:35	60	7.21	20.16	873	-22.5	1.77	4.10	NM
		15:40	60	7.19	20.49	876	-22.3	1.96	2.38	NM
DSP-117	05/26/2006	10:45	270	6.75	13.10	1677	46	2.41	2.50	0.21
		10:50	270	6.75	13.13	1684	41	2.13	2.00	0.36
		10:55	270	6.76	13.05	1684	40	1.95	2.20	0.36
DSP-118	05/25/2006	10:05	NM	7.83	15.26	597	-18.9	1.83	3.64	NM
		10:10	NM	7.82	15.52	598	-20.2	1.87	3.07	NM
		10:15	NM	7.81	15.35	597	-23.7	1.50	3.27	NM
DSP-121	05/26/2006	15:10	190	7.22	15.84	1067	-361	2.11	0.60	0.25
		15:15	190	7.20	16.14	1070	-412	1.97	0.70	0.25
		15:20	190	7.18	16.18	1072	-203	1.59	0.80	0.25
DSP-122	05/25/2006	16:45	100	7.23	22.94	1160	-62.4	1.38	14.80	NM
		16:50	100	7.20	23.48	1162	-71.4	1.28	9.58	NM
		16:55	100	7.18	23.50	1160	-75.9	1.10	8.63	NM
DSP-123	05/26/2006	9:55	100	7.29	17.21	835	-9.2	0.85	26.40	NM
		9:55	100	7.27	17.52	833	-9.3	0.60	24.30	NM
		9:55	100	7.27	17.73	833	-10.3	0.66	26.30	NM
DSP-124	05/26/2006	11:45	200	6.89	18.47	1265	-16.5	1.84	2.49	NM
		11:50	200	6.86	18.73	1263	-17.3	1.73	1.94	NM
		11:55	200	6.85	18.81	1263	-18.6	1.38	2.19	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
DSP-125	06/01/2006	13:15	100	6.81	19.05	3144	-36.4	0.49	9.93	NM
		13:20	100	6.80	19.08	3141	-37.6	0.40	9.53	NM
		13:25	100	6.79	19.03	3142	-38.6	0.38	8.09	NM
DSP-126	05/24/2006	11:20	150	7.17	15.18	930	-173	1.28	6.00	0.20
		11:25	150	7.16	15.22	930	-179.5	1.18	5.00	0.20
		11:30	150	7.16	15.25	930	-177.3	1.17	4.80	0.20
DSP-127	05/30/2006	10:30	100	7.81	18.71	1409	-65.6	0.69	11.90	NM
		10:35	100	7.83	18.75	1400	-66.8	0.66	11.10	NM
		10:40	100	7.85	18.78	1399	-67.2	0.71	10.90	NM
DSP-147	05/30/2006	9:25	130	7.99	18.02	1222	373	2.15	1.20	0.17
		9:30	130	8.02	17.72	1223	344	1.89	1.40	0.17
		9:35	130	8.05	18.60	1223	363	1.67	1.40	0.17
DSP-148	05/30/2006	13:30	113	6.82	13.80	1510	-253	2.15	11.30	0.15
		13:35	113	6.84	14.02	1523	-259	1.89	8.93	0.15
		13:40	113	6.80	13.96	1527	-266	1.67	8.23	0.15
DSP-149R	05/31/2006	9:45	88	9.88	19.01	741	-62	1.50	11.40	0.12
		9:50	88	9.89	18.96	742	-21	1.30	9.50	0.12
		9:55	88	9.89	18.65	740	-2.7	1.38	8.50	0.12
DSP-150	05/24/2006	12:15	200	7.13	20.99	978	-10.7	1.14	10.50	NM
		12:20	200	7.13	20.99	979	-10.1	1.05	9.80	NM
		12:25	200	7.13	21.27	981	-9.7	0.88	9.40	NM
DSP-151	05/24/2006	14:00	60	7.85	19.10	639	-48.6	2.22	4.11	NM
		14:05	60	7.85	19.69	638	-59	2.05	4.28	NM
		14:10	60	7.85	19.71	640	-68.3	2.00	4.61	NM
DSP-152	05/23/2006	11:00	200	7.12	14.64	1127	-8.5	2.67	2.00	0.26
		11:05	200	7.11	14.79	1116	-8.2	2.50	0.65	0.26
		11:10	200	7.13	15.45	1116	-17.7	2.44	2.35	0.26
DSP-153	05/24/2006	14:40	200	9.54	20.13	747	969	1.32	4.00	0.26
		14:45	200	9.47	20.17	748	-169	0.94	4.00	0.26
		14:50	200	9.37	19.72	750	-90	0.83	4.30	0.26

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
DSP-154	05/24/2006	17:00	500	8.19	13.68	765	-120	2.19	2.60	0.66
		17:05	500	8.19	13.75	767	709	1.73	2.20	0.66
		17:10	500	8.20	14.20	765	-289	1.51	2.60	0.66
DSP-155	05/25/2006	14:50	250	7.62	22.32	783	-21.1	2.29	2.51	NM
		14:55	250	7.60	22.28	783	-22.4	2.12	1.96	NM
		15:00	250	7.57	22.50	783	-23.6	1.84	2.02	NM
DSP-156	05/30/2006	15:35	76	7.92	21.02	834	-9.9	1.09	18.20	0.10
		15:40	76	7.92	21.27	837	-15.2	0.89	17.00	0.10
		15:45	76	7.92	21.58	833	-16.4	0.76	15.40	0.10
DSP-157S	05/23/2006	15:10	200	6.65	15.00	9173	-113.3	0.44	9.50	0.26
		15:15	250	6.66	15.38	9176	-60.1	0.36	6.40	0.40
		15:20	250	6.65	14.85	9100	-281.4	0.36	7.50	0.40
DSP-157M	05/23/2006	13:25	200	7.55	15.56	1578	-179.7	1.08	16.20	0.26
		13:30	200	7.55	15.57	1587	-165	0.94	15.10	0.26
		13:35	200	7.55	15.82	1587	-162	0.82	13.70	0.26
DSP-158S	05/25/2006	10:55	250-300	7.16	14.11	797	-317	2.20	10.40	0.33
		11:00	250-300	7.14	14.30	796	-290	1.78	10.20	0.33
		11:05	250-300	7.13	14.74	803	-280	1.61	10.20	0.33
DSP-158M	05/25/2006	9:15	300	7.54	15.26	595	-552	1.27	3.00	0.40
		9:20	300	7.54	14.94	594	-476	1.12	2.30	0.40
		9:25	300	7.55	15.13	594	-617	0.99	3.60	0.40
DSP-159S	05/25/2006	16:00	300	6.81	14.96	2007	-230	7.70	4.90	0.40
		16:05	300	6.82	15.30	2032	-105	2.55	6.20	0.40
		16:10	300	6.83	15.21	2160	-96	1.76	14.30	0.40
DSP-159M	05/25/2006	14:30	<250	7.43	18.10	707	-328	1.76	6.30	<0.33
		14:35	<250	7.42	18.28	706	-305	1.43	4.80	<0.33
		14:40	<250	7.42	18.22	705	-315	1.17	3.10	<0.33
MW-DN-101S	05/26/2006	13:55	75	7.03	18.63	1069	-78.9	1.46	57.40	NM
		14:00	75	7.02	19.15	1069	-82.6	1.41	58.60	NM
		14:05	75	7.02	19.22	1069	-85.6	1.41	55.60	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-101I	05/26/2006	15:20	100	7.05	18.82	1605	-22.6	0.75	6.41	NM
		15:25	100	7.03	18.81	1609	-22.6	0.65	4.40	NM
		15:30	100	7.04	19.25	1613	-22.6	0.59	3.22	NM
MW-DN-102S	06/01/2006	11:20	100	6.54	19.17	5814	-27.5	0.32	47.30	NM
		11:25	100	6.54	19.19	5812	-28.7	0.30	49.40	NM
		11:30	100	6.53	19.19	8811	-29.6	0.28	51.60	NM
MW-DN-102I	06/01/2006	8:30	100	8.25	18.76	1952	-11.7	0.34	101.00	NM
		8:30	100	8.25	18.74	1948	-11.9	0.31	82.60	NM
		8:30	100	8.24	18.78	1951	-11.8	0.30	81.70	NM
MW-DN-103S	05/26/2006	9:20	180	6.58	14.66	1527	66.9	7.08	2.70	0.24
		9:25	180	6.59	15.09	1533	79.2	7.07	2.30	0.24
		9:30	180	6.59	15.25	1538	-82.9	6.70	1.90	0.24
MW-DN-103I	05/26/2006	10:55	180	7.01	15.36	1292	-635	8.29	3.00	0.92
		11:00	180	7.00	15.00	1286	-873	3.54	3.30	0.46
		11:05	180	6.99	14.94	1281	-919	2.57	2.50	0.46
MW-DN-104S	05/30/2006	16:15	100	6.46	23.15	2947	-14.7	1.70	30.70	NM
		16:20	100	6.44	23.12	2946	-14.2	1.68	31.70	NM
		16:25	100	6.44	23.12	2946	-14.1	1.58	24.30	NM
MW-DN-105S	06/01/2006	13:15	100	7.05	16.06	1430	-21.3	1.61	8.10	NM
		13:20	100	7.03	16.06	1428	-21.1	1.64	7.79	NM
		13:25	100	7.01	16.04	1424	-20.4	1.66	7.94	NM
MW-DN-106S	05/26/2006	13:40	250	6.74	13.66	1143	181.7	7.59	0.60	1.98
		13:45	250	6.73	13.64	1144	155.7	4.96	0.70	0.33
		13:50	250	6.73	13.73	1141	136.4	3.31	0.70	0.33
MW-DN-107S	05/31/2006	14:25	100	7.74	41.29	426	-54.1	0.48	21.70	NM
		14:25	100	7.76	41.28	428	-54	0.35	11.00	NM
		14:25	100	7.75	41.28	429	-53.5	0.33	7.46	NM
MW-DN-108I	05/26/2006	16:50	100	7.43	16.28	1614	-65.3	0.43	15.90	NM
		16:55	100	7.40	16.11	1618	-68.6	0.44	12.30	NM
		17:00	100	7.41	16.11	1615	-71.6	0.43	NM	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-108I	08/14/2006	9:20	200	7.31	19.04	1570	63	1.23	16.2	NM
		9:25	200	7.09	18.47	1570	63	0.85	3.47	NM
		9:30	200	7.07	18.70	1570	62	0.68	2.16	NM
		9:35	200	7.12	18.64	1560	60	0.67	2.07	NM
		9:40	200	7.12	18.59	1560	60	0.65	1.96	NM
MW-DN-109S	05/31/2006	11:20	100	7.16	15.83	1702	-25.1	0.45	9.69	NM
		11:25	100	7.15	15.88	1698	-27.4	0.42	6.30	NM
		11:30	100	7.15	15.89	1696	-28.2	0.37	6.03	NM
MW-DN-109I	05/31/2006	9:10	100	7.29	17.11	1274	-9.7	1.81	11.60	NM
		9:15	100	7.29	17.17	1275	-19.7	1.76	6.17	NM
		9:20	100	7.29	17.17	1272	-19.7	1.57	4.78	NM
MW-DN-110S	05/30/2006	13:25	100	6.94	17.58	2162	-45.4	0.34	37.2	NM
		13:30	100	6.97	17.61	2157	-47	0.33	20.0	NM
		13:35	100	6.95	17.64	2154	-48.2	0.33	11.8	NM
MW-DN-110I	05/30/2006	14:15	NM	7.27	18.13	1406	-23.2	1.14	15.9	NM
		14:20	NM	7.24	18.17	1392	-24.1	1.16	13.0	NM
		14:25	NM	7.21	18.19	1386	-24.9	1.19	12.1	NM
MW-DN-111S	05/31/2006	11:20	100	7.34	19.00	567	-86.1	0.21	29.8	NM
		11:25	100	7.33	18.97	567	-89.4	0.19	19.0	NM
		11:30	100	7.31	18.96	565	-91.2	0.17	18.1	NM
MW-DN-112S	08/10/2006	10:15	200	7.11	21.49	3550	66	0.81	37.0	NM
		10:20	200	7.14	21.78	3730	65	0.65	14.4	NM
		10:25	200	7.17	21.92	3820	61	0.55	12.4	NM
		10:30	200	7.22	21.95	3770	59	0.46	13.0	NM
		10:35	200	7.13	22.00	3770	57	0.43	11.6	NM
		10:40	200	7.14	21.98	3780	53	0.39	37.3	NM
		10:45	200	7.12	21.95	3790	50	0.48	54.5	NM
		10:50	200	7.20	21.87	3800	49	0.40	24.7	NM
		10:55	200	7.24	21.83	3840	48	0.39	25.4	NM
		11:00	200	7.23	21.84	3830	48	0.40	25.7	NM

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-112I	08/10/2006	10:25	150	7.59	20.83	1750	323	6.45	175	NM
		10:30	150	7.37	19.05	1740	325	0.92	112	NM
		10:35	150	7.19	19.74	1530	325	0.59	96.1	NM
		10:40	150	7.15	19.67	1630	323	0.52	181	NM
		10:45	150	7.17	19.83	1680	316	0.48	274	NM
		10:50	150	7.14	19.89	1560	312	0.45	464	NM
		10:55	150	7.17	19.79	1730	309	0.47	458	NM
		11:00	150	7.17	19.75	1640	305	0.49	629	NM
		11:05	150	7.16	19.68	1590	299	0.16	>1000	NM
		11:10	150	7.16	19.71	1590	300	0.60	>1000	NM
		11:15	150	7.16	19.77	1580	299	0.61	>1000	NM
		11:20	150	7.27	19.02	1560	253	0.88	935	NM
		11:25	150	7.22	19.26	1530	257	0.82	>1000	NM
		11:30	150	7.18	19.55	1490	262	0.80	642	NM
		11:35	150	7.16	19.46	1470	265	0.79	618	NM
		11:40	150	7.15	19.39	1460	267	0.78	581	NM
		11:45	150	7.13	19.24	1426	269	0.81	545	NM
		11:50	150	7.14	19.09	1418	270	0.84	434	NM
		11:55	150	7.13	19.13	1414	271	0.82	468	NM
		12:00	150	7.13	19.10	1415	270	0.82	465	NM
		12:05	150	7.14	19.09	1413	271	0.81	460	NM
MW-DN-113S	08/09/2006	9:40	100	7.43	26.70	1326	79	2.34	15.70	NM
		9:45	100	7.43	26.99	1327	78	2.43	6.86	NM
		9:50	100	7.38	27.34	1325	79	2.66	3.24	NM
		9:55	100	7.41	27.39	1328	78	2.67	4.17	NM
MW-DN-113I	08/09/2006	10:50	200	7.21	22.80	1710	289	2.53	27.5	NM
		10:55	200	7.16	21.92	1670	294	2.54	21.1	NM
		11:00	150	7.15	21.50	1700	297	2.37	16.0	NM
		11:05	150	7.15	21.85	1750	299	2.19	16.3	NM
		11:10	150	7.15	21.58	1760	301	2.02	15.9	NM
		11:15	150	7.15	21.23	1800	302	1.98	15.8	NM
		11:20	150	7.16	21.19	1820	302	1.99	16.0	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]		*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-114S	08/11/2006	12:40	190	7.32	22.57	1209	46	1.17	#	31	NM
		12:45	190	7.26	22.53	1297	46	0.88	#	20.8	NM
		12:50	190	7.13	22.46	1313	44	0.72	#	18.0	NM
		12:55	190	7.11	22.38	1313	42	0.66		14.9	NM
		13:00	190	7.10	22.58	1310	40	0.61		14.2	NM
		13:05	190	7.08	22.39	1309	39	0.60		13.8	NM
		13:10	190	7.07	22.41	1309	40	0.59		14	NM
MW-DN-114I	08/14/2006	12:25	200	7.02	20.93	2110	67	1.14		22	NM
		12:30	380	6.99	19.48	2070	67	0.71		15.9	NM
		12:35	380	6.87.	19.18	2100	67	0.50		5.76	NM
		12:40	380	6.90	19.17	2100	67	0.49		2.75	NM
		12:45	380	6.87	19.14	2110	68	0.47		2.21	NM
		12:50	380	6.86	19.16	2110	68	0.46		1.98	NM
MW-DN-115S	08/14/2006	10:45	200	6.63	22.36	1342	64	1.01		13.9	NM
		10:50	200	6.91	22.48	1342	65	0.98		14.6	NM
		10:55	200	6.89	22.51	1345	66	1.02		14	NM
		11:00	200	6.84	22.61	1347	66	1.06		7.2	NM
		11:05	200	6.82	22.51	1346	66	1.07		3.65	NM
MW-DN-115I	08/11/2006	10:20	200	7.23	21.94	1475	62	1.07		447	NM
		10:25	200	7.12	22.03	1407	60	0.75		137	NM
		10:30	200	7.21	22.12	1362	54	0.59		56.1	NM
		10:35	200	7.22	22.16	1340	50	0.53		42.8	NM
		10:40	200	7.19	22.17	1335	44	0.46		43.5	NM
		10:45	200	7.18	22.28	1332	30	0.39		37.5	NM
		10:50	200	7.25	22.40	1334	24	0.38		28.3	NM
		10:55	200	7.30	22.73	1338	6	0.34		23.3	NM
		11:00	200	7.36	22.80	1339	-4	0.32		20.6	NM
		11:05	200	7.36	22.99	1339	-11	0.33		17.2	NM
		11:10	200	7.32	22.74	1341	-17	0.32		22.7	NM
		11:15	200	7.34	22.57	1333	-23	0.32		13.6	NM
		11:20	200	7.34	22.52	1328	-25	0.33		12.8	NM
		11:25	200	7.33	22.49	1327	-26	0.32		12.4	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-116S	08/09/2006	13:00	200	7.31	17.92	4690	77	1.63	136	NM
		13:05	150	7.20	17.70	1690	77	1.13	52.9	NM
		13:10	150	7.12	17.67	1670	78	1.23	40.5	NM
		13:15	150	7.13	17.75	1680	78	1.37	26.6	NM
		13:20	150	7.10	17.7	1680	79	1.32	20.0	NM
		13:25	150	7.08	18.3	1690	78	1.04	14.6	NM
		13:30	150	7.07	18.82	1690	78	1.08	10.31	NM
		13:35	150	7.06	18.86	1690	78	1.10	7.29	NM
		13:40	150	7.07	18.78	1690	78	0.99	6.96	NM
		13:45	150	7.08	18.77	1690	78	0.97	4.91	NM
MW-DN-116I	08/09/2006	12:55	200	7.06	18.60	1640	127	0.75	12.1	NM
		13:00	200	7.01	18.91	1590	117	0.64	11.4	NM
		13:05	200	6.99	19.04	1530	108	0.56	7.37	NM
		13:10	200	6.99	19.04	1500	105	0.53	6.32	NM
		13:15	200	6.98	18.82	1490	102	0.51	5.91	NM
		13:20	200	6.98	18.95	1410	100	0.49	6.29	NM
		13:25	200	6.99	18.88	1374	97	0.49	5.16	NM
		13:30	200	6.99	18.98	1424	95	0.49	4.07	NM
MW-DN-117I	08/10/2006	13:20	200	7.13	16.68	733	285	1.18	>1000	NM
		13:25	200	7.11	16.64	770	285	1.19	480	NM
		13:30	200	7.00	16.60	690	288	0.68	250	NM
		13:35	200	7.04	16.60	631	288	0.63	118	NM
		13:40	200	7.01	16.84	738	290	0.61	69	NM
		13:45	200	6.99	16.99	740	291	0.59	56.3	NM
		13:50	200	7.00	17.42	733	294	0.62	49.3	NM
		13:55	200	6.95	17.17	745	296	0.51	25.5	NM
		14:00	200	6.94	17.08	748	297	0.45	18.3	NM
		14:05	200	6.93	17.17	750	297	0.43	12.4	NM
		14:10	200	9.93	17.15	749	297	0.43	7.62	NM
		14:15	200	6.93	17.17	750	298	0.43	5.09	NM

TABLE 4.5

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-118S	08/10/2006	15:25	200	7.02	20.90	1063	257	0.80	2.93	NM
		15:30	200	6.95	20.81	1065	243	0.60	4.23	NM
		15:35	200	6.95	20.72	1093	224	0.46	2.17	NM
		15:40	200	6.94	20.68	1109	217	0.45	3.18	NM
		15:45	200	6.94	20.62	1127	210	0.41	2.08	NM
		15:50	200	6.93	20.59	1130	207	0.40	2.13	NM
		15:55	200	6.94	20.57	1131	205	0.40	1.99	NM
MW-DN-119S	08/11/2006	8:30	200	6.95	17.48	1600	71	0.84	62.3	NM
		8:35	150	6.90	17.95	1580	71	0.75	66.5	NM
		8:40	150	6.92	18.04	1590	72	0.69	43.1	NM
		8:45	150	6.88	18.13	1590	71	0.64	32	NM
		8:50	150	6.84	18.08	1600	71	0.62	31	NM
		8:55	150	6.85	18.09	1600	72	0.61	33.2	NM
MW-DN-119I	08/11/2006	8:30	200	7.04	17.49	997	338	1.00	418	NM
		8:35	200	6.91	17.58	1000	338	0.68	118	NM
		8:40	200	6.88	17.68	1000	338	0.59	49.7	NM
		8:45	200	6.87	17.71	1001	336	0.53	24.1	NM
		8:50	200	6.88	17.72	1004	333	0.52	14.7	NM
		8:55	200	6.89	17.76	1006	328	0.50	6.51	NM
		9:00	200	6.87	17.83	1007	322	0.48	5.58	NM
		9:05	200	6.86	17.80	1008	321	0.47	4.98	NM
MW-DN-120S	08/08/2006	15:40	300	6.55	18.00	2330	241	3.40	41.5	NM
		15:45	200	6.30	16.96	2330	216	2.24	24.5	NM
		15:50	300	6.36	15.88	2340	207	1.49	11.9	NM
		15:55	250	6.36	15.81	2340	202	1.20	9.48	NM
		16:00	250	6.37	15.92	2330	196	0.91	3.85	NM

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-120I	08/08/2006	15:40	300	6.91	14.62	1680	66	0.79	>1000	NM
		15:45	200	6.83	15.25	1403	68	0.41	>1000	NM
		15:50	400	6.84	15.33	1362	68	0.37	>1000	NM
		15:55	200	6.87	15.39	1319	68	0.34	>1000	NM
		16:00	200	6.79	16.71	1311	68	0.31	857	NM
		16:05	200	6.87	13.85	1280	67	0.29	534	NM
		16:10	200	6.87	13.78	1239	69	0.28	444	NM
		16:15	200	6.88	13.76	1220	69	0.26	328	NM
		16:20	200	6.88	13.76	1211	69	0.25	295	NM
		16:25	200	6.87	13.78	1202	69	0.24	218	NM
		16:30	200	6.87	13.90	1190	69	0.23	150	NM
		16:35	200	6.96	13.65	1185	64	0.22	120	NM
		16:40	200	6.95	13.76	1179	65	0.22	115	NM
		16:45	200	6.94	13.71	1188	65	0.22	112	NM
MW-DN-121S	08/08/2006	11:15	100	6.63	17.93	1346	39	1.34	>1000	NM
		11:20	150	6.59	16.98	1353	37	1.24	>1000	NM
		11:25	150	6.60	15.82	1354	37	1.09	792	NM
		11:30	300	6.60	15.74	1348	37	0.83	283	NM
		11:35	200	6.60	15.70	1331	37	0.64	65.2	NM
		11:40	300	6.61	15.76	1325	36	0.54	37.1	NM
		11:45	300	6.63	15.74	1313	36	0.44	12.8	NM
		11:50	300	6.64	15.75	1304	35	0.39	12	NM
		11:55	300	6.65	15.74	1300	34	0.37	7.31	NM
		12:00	300	6.65	15.71	1296	34	0.36	3.76	NM

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP (mV)* [5] [6]	*DO (mg/L)* [7] [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-121I	08/08/2006	7:55	400	7.56	13.36	1192	73	0.51	>1000	NM
		8:00	400	7.56	14.76	1181	72	0.49	>1000	NM
		8:05	400	7.59	13.40	1175	72	0.42	904	NM
		8:10	400	7.57	13.91	1176	73	0.38	>1000	NM
		8:15	400	7.58	14.45	1171	72	0.38	>1000	NM
		8:20	400	7.57	14.58	1170	73	0.39	>1000	NM
		8:25	300	7.57	14.03	1176	73	0.39	371.00	NM
		8:30	300	7.57	14.14	1176	73	0.40	201.00	NM
		8:35	300	7.58	14.17	1176	72	0.39	188.00	NM
		8:40	300	7.58	14.21	1175	72	0.39	189.00	NM
		8:45	300	7.57	14.24	1173	72	0.38	184.00	NM
MW-DN-122S	08/08/2006	9:25	200	7.27	17.21	862	67	3.03	>1000	NM
		9:30	200	7.21	17.12	943	67	3.50	338	NM
		9:35	150	7.18	17.63	958	68	3.44	207	NM
		9:40	150	7.13	17.03	983	70	3.88	113	NM
		9:45	150	7.11	16.93	982	69	3.86	30.1	NM
		9:50	150	7.11	16.91	981	69	3.91	20.7	NM
		9:55	150	7.14	16.98	981	68	3.93	8.9	NM
		10:00	150	7.16	16.99	981	68	3.93	4.72	NM
MW-DN-122I	08/08/2006	7:55	400	7.56	13.36	1192	73	0.51	>1000	NM
		8:00	400	7.56	14.76	1181	72	0.49	>1000	NM
		8:05	400	7.59	13.42	1175	72	0.42	904	NM
		8:10	400	7.57	13.91	1176	73	0.38	>1000	NM
		8:15	400	7.58	14.45	1171	72	0.38	>1000	NM
		8:20	400	7.57	14.58	1170	73	0.39	>1000	NM
		8:25	300	7.57	14.03	1176	73	0.39	371	NM
		8:30	300	7.57	14.14	1176	73	0.40	201	NM
		8:35	300	7.58	14.17	1176	72	0.39	188	NM
		8:40	300	7.58	17.21	1175	72	0.39	189	NM
		8:45	300	7.57	14.24	1173	72	0.38	184	NM

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)* [1]	*pH (Std. Units)* [2]	*Temperature (°C)* [3]	*Conductivity (µS/cm)* [4]	*ORP* [5] *(mV)* [6]	*DO* [7] *(mg/L)* [8]	*Turbidity (NTU)* [9]	*Volume Purged (gallons)*
MW-DN-123I	08/08/2006	13:45	200	7.37	17.91	525	55	2.74	294	NM
		13:50	200	7.34	18.06	520	55	2.41	110	NM
		13:55	150	7.31	18.79	517	55	2.20	73.2	NM
		14:00	200	7.38	17.53	516	56	2.27	49.9	NM
		14:05	160	7.32	17.13	512	57	1.80	22.1	NM
		14:10	150	7.33	17.65	511	57	1.79	13	NM
		14:15	150	7.26	17.70	510	60	1.60	9.98	NM
		14:20	150	7.30	18.73	512	59	1.60	6.52	NM
		14:25	150	7.32	16.62	517	62	1.60	4.73	NM

Notes:

(1) mL/min - milliliters per minute
(2) Std. Units - standard units
(3) °C - degrees Celsius
(4) µS/cm - microsiemens per centimeter
(5) ORP - oxidation-reduction potential
(6) mV - millivolts
(7) DO - dissolved oxygen
(8) mg/L - milligrams per liter
(9) NTU - nephelometric turbidity units
The last three readings are provided in the table

TABLE 4.6

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Date*	*Time*	*Matrix*	*Analysis*
DSP-152	WG-DN-DSP-152-052306-JH-001		5/23/2006	11:14	Groundwater	Tritium / Target Radionuclides
DSP-157M	WG-DN-DSP-157M-052306-JH-002		5/23/2006	13:36	Groundwater	Tritium / Target Radionuclides
DSP-157S	WG-DN-DSP-157S-052306-JH-003		5/23/2006	15:50	Groundwater	Tritium / Target Radionuclides
DSP-126	WG-DN-DSP-126-052406-JH-004		5/24/2006	11:37	Groundwater	Tritium / Target Radionuclides
DSP-153	WG-DN-DSP-153-052406-JH-005		5/24/2006	13:20	Groundwater	Tritium / Target Radionuclides
DSP-154	WG-DN-DSP-154-052506-JH-006		5/25/2006	6:40	Groundwater	Tritium / Target Radionuclides
DSP-158M	WG-DN-DSP-158M-052506-JH-007		5/25/2006	9:40	Groundwater	Tritium / Target Radionuclides
DSP-158S	WG-DN-DSP-158S-052506-JH-008		5/25/2006	13:00	Groundwater	Tritium / Target Radionuclides
DSP-159M	WG-DN-DSP-159M-052506-JH-009		5/25/2006	14:45	Groundwater	Tritium / Target Radionuclides
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-010		5/26/2006	9:40	Groundwater	Tritium / Target Radionuclides
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-011	Duplicate (010)	5/26/2006	10:00	Groundwater	Tritium / Target Radionuclides
MW-DN-103I	WG-DN-MW-DN-103I-052606-JH-012		5/26/2006	11:05	Groundwater	Tritium / Target Radionuclides
MW-DN-106S	WG-DN-MW-DN-106S-052606-JH-013		5/26/2006	14:00	Groundwater	Tritium / Target Radionuclides
DSP-121	WG-DN-DSP-121-052606-JH-014		5/26/2006	15:20	Groundwater	Tritium / Target Radionuclides
DSP-117	WG-DN-DSP-117-052606-JH-015		5/26/2006	16:55	Groundwater	Tritium / Target Radionuclides
DSP-147	WG-DN-DSP-147-053006-JH-016		5/30/2006	9:40	Groundwater	Tritium / Target Radionuclides
DSP-148	WG-DN-DSP-148-053006-JH-017		5/30/2006	13:50	Groundwater	Tritium / Target Radionuclides
DSP-156	WG-DN-DSP-156-053006-JH-018		5/30/2006	15:50	Groundwater	Tritium / Target Radionuclides
DSP-149R	WG-DN-DSP-149R-053106-JH-019		5/31/2006	10:00	Groundwater	Tritium / Target Radionuclides
DSP-149R	WG-DN-DSP-149R-053106-JH-020	Duplicate (019)	5/31/2006	10:50	Groundwater	Tritium / Target Radionuclides
DSP-159S	WG-DN-DSP-159S-053106-JH-022		5/31/2006	13:30	Groundwater	Tritium / Target Radionuclides
DSP-105	WG-DN-DSP-DN-105-052306-JL-051		5/23/2006	11:30	Groundwater	Tritium / Target Radionuclides
DSP-106	WG-DN-DSP-DN-106-052306-JL-052		5/23/2006	12:30	Groundwater	Tritium / Target Radionuclides
DSP-107	WG-DN-DSP-DN-107-052306-JL-053		5/23/2006	13:50	Groundwater	Tritium / Target Radionuclides
DSP-150	WG-DN-DSP-DN-150-052406-JL-054		5/24/2006	12:25	Groundwater	Tritium / Target Radionuclides
DSP-151	WG-DN-DSP-DN-151-052406-JL-055		5/24/2006	14:15	Groundwater	Tritium / Target Radionuclides
DSP-108	WG-DN-DSP-DN-108-052406-JL-056		5/24/2006	17:05	Groundwater	Tritium / Target Radionuclides
DSP-118	WG-DN-DSP-DN-118-052506-JL-057		5/25/2006	10:15	Groundwater	Tritium / Target Radionuclides
DSP-155	WG-DN-DSP-DN-155-052506-JL-058		5/25/2006	15:00	Groundwater	Tritium / Target Radionuclides
DSP-122	WG-DN-DSP-DN-122-052506-JL-059		5/25/2006	17:00	Groundwater	Tritium / Target Radionuclides
DSP-123	WG-DN-DSP-DN-123-052606-JL-060		5/26/2006	10:10	Groundwater	Tritium / Target Radionuclides
DSP-123	WG-DN-DSP-DN-123-052606-JL-061	Duplicate (060)	5/26/2006	10:20	Groundwater	Tritium / Target Radionuclides
DSP-124	WG-DN-DSP-DN-124-052606-JL-062		5/26/2006	12:00	Groundwater	Tritium / Target Radionuclides
MW-DN-101S	WG-DN-MW-DN-101S-052606-JL-063		5/26/2006	14:10	Groundwater	Tritium / Target Radionuclides
MW-DN-101I	WG-DN-MW-DN-101I-052606-JL-064		5/26/2006	15:35	Groundwater	Tritium / Target Radionuclides

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Date*	*Time*	*Matrix*	*Analysis*
MW-DN-108I	WG-DN-MW-DN-108I-052606-JL-065		5/26/2006	17:00	Groundwater	Tritium / Target Radionuclides / Strontium-90
DSP-127	WG-DN-DSP-DN-127-053006-JL-066		5/30/2006	10:55	Groundwater	Tritium / Target Radionuclides
MW-DN-110S	WG-DN-MW-DN-110S-053006-JL-067		5/30/2006	14:10	Groundwater	Tritium / Target Radionuclides
MW-DN-110I	WG-DN-MW-DN-110I-053006-JL-068		5/30/2006	15:15	Groundwater	Tritium / Target Radionuclides
MW-DN-104S	WG-DN-MW-DN-104S-053006-JL-069		5/30/2006	17:20	Groundwater	Tritium / Target Radionuclides
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-070		5/31/2006	10:15	Groundwater	Tritium / Target Radionuclides
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-071	Duplicate (070)	5/31/2006	10:25	Groundwater	Tritium / Target Radionuclides
MW-DN-109S	WG-DN-MW-DN-109S-053106-JL-072		5/31/2006	11:45	Groundwater	Tritium / Target Radionuclides
MW-DN-111S	WG-DN-MW-DN-111S-053106-JL-073		5/31/2006	14:00	Groundwater	Tritium / Target Radionuclides
MW-DN-107S	WG-DN-MW-DN-107S-053106-JL-074		5/31/2006	14:50	Groundwater	Tritium / Target Radionuclides
MW-DN-102I	WG-DN-MW-DN-102I-060106-JL-075		6/1/2006	10:45	Groundwater	Tritium / Target Radionuclides
MW-DN-102S	WG-DN-MW-DN-102S-060106-JL-076		6/1/2006	11:50	Groundwater	Tritium / Target Radionuclides
MW-DN-105S	WG-DN-MW-DN-105S-060106-JL-077		6/1/2006	14:10	Groundwater	Tritium / Target Radionuclides
DSP-125	WG-DN-DSP-DN-125-060106-JL-078		6/1/2006	15:10	Groundwater	Tritium / Target Radionuclides
SW-DN-103	WS-DN-SW-103-053106-JH-021		5/31/2006	12:00	Surface Water	Tritium / Target Radionuclides
SW-DN-101	WS-DN-SW-101-053106-JH-023		5/31/2006	14:00	Surface Water	Tritium / Target Radionuclides
SW-DN-102	WS-DN-SW-102-053106-JH-024		5/31/2006	15:20	Surface Water	Tritium / Target Radionuclides
SW-DN-105	WS-DN-SW-105-060106-JH-025		6/1/2006	9:00	Surface Water	Tritium / Target Radionuclides
SW-DN-104	WS-DN-SW-104-060106-JH-026		6/1/2006	9:40	Surface Water	Tritium / Target Radionuclides
SW-DN-106	WS-DN-SW-106-060106-JH-027		6/1/2006	11:20	Surface Water	Tritium / Target Radionuclides
SW-DN-106	WS-DN-SW-106-060106-JH-028	Duplicate (027)	6/1/2006	11:40	Surface Water	Tritium / Target Radionuclides
MW-DN-122I	WG-DN-MW-DN-122I-080806-GL-001		8/8/2006	8:50	Groundwater	Tritium / Target Radionuclides
MW-DN-122S	WG-DN-MW-DN-122S-080806-GL-002		8/8/2006	10:05	Groundwater	Tritium / Target Radionuclides
MW-DN-121S	WG-DN-MW-DN-121S-080806-GL-003		8/8/2006	12:05	Groundwater	Tritium / Target Radionuclides
MW-DN-123I	WG-DN-MW-DN-123I-080806-GL-004		8/8/2006	14:30	Groundwater	Tritium / Target Radionuclides
MW-DN-120I	RB-DN-MW-DN-120I-080806-GL-005		8/8/2006	14:40	Water	Tritium / Target Radionuclides
MW-DN-120I	WG-DN-MW-DN-120I-080806-GL-006		8/8/2006	16:50	Groundwater	Tritium / Target Radionuclides
MW-DN-120S	WG-DN-MW-DN-120S-080806-GL-007		8/8/2006	16:10	Groundwater	Tritium / Target Radionuclides
MW-DN-113S	WG-DN-MW-DN-113S-080906-GL-008		8/9/2006	10:00	Groundwater	Tritium / Target Radionuclides
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-009		8/9/2006	11:25	Groundwater	Tritium / Target Radionuclides
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-010	Duplicate (009)	8/9/2006	11:45	Groundwater	Tritium / Target Radionuclides
MW-DN-116S	WG-DN-MW-DN-116S-080906-GL-011		8/9/2006	13:35	Groundwater	Tritium / Target Radionuclides
MW-DN-116I	WG-DN-MW-DN-116I-080906-GL-012		8/9/2006	13:50	Groundwater	Tritium / Target Radionuclides
MW-DN-112S	WG-DN-MW-DN-112S-081006-GL-013		8/10/2006	11:05	Groundwater	Tritium / Target Radionuclides
MW-DN-112I	WG-DN-MW-DN-112I-081006-GL-014		8/10/2006	12:10	Groundwater	Tritium / Target Radionuclides

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Date*	*Time*	*Matrix*	*Analysis*
MW-DN-117I	WG-DN-MW-DN-117I-081006-GL-015		8/10/2006	14:20	Groundwater	Tritium / Target Radionuclides
MW-DN-118S	WG-DN-MW-DN-118I-081006-GL-016		8/10/2006	16:00	Groundwater	Tritium / Target Radionuclides
MW-DN-119S	WG-DN-MW-DN-119S-081106-GL-017		8/11/2006	9:00	Groundwater	Tritium / Target Radionuclides
MW-DN-119I	WG-DN-MW-DN-119I-081106-GL-018		8/11/2006	9:10	Groundwater	Tritium / Target Radionuclides
MW-DN-115I	WG-DN-MW-DN-115I-081106-GL-019		8/11/2006	11:30	Groundwater	Tritium / Target Radionuclides
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-020		8/11/2006	13:15	Groundwater	Tritium / Target Radionuclides
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-021	Duplicate (020)	8/11/2006	13:40	Groundwater	Tritium / Target Radionuclides
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-022		8/14/2006	9:45	Groundwater	Tritium / Target Radionuclides
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-023	Duplicate (022)	8/14/2006	10:10	Groundwater	Tritium / Target Radionuclides
MW-DN-115S	WG-DN-MW-DN-115S-081406-GL-024		8/14/2006	11:10	Groundwater	Tritium / Target Radionuclides
MW-DN-114I	WG-DN-MW-DN-114I-081406-GL-025		8/14/2006	12:55	Groundwater	Tritium / Target Radionuclides
MW-DN-123S	WG-DN-MW-DN-123S-080806-GL-026		8/8/2006	14:45	Groundwater	Tritium

Note:

QC - Quality Control
Target Radionuclides: Sr-89/90, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb-95, Zr-95, Cs-134, Cs-137, Ba-140, and La-140
Duplicate (020) - Duplicate of sample number in parenthesis

TABLE 5.1

SUMMARY OF CALCULATED VERTICAL GRADIENTS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	Top of Screen Elevation (ft AMSL) [1]	Bottom of Screen Elevation (ft AMSL)	Mid-Point of Screen Elevation (ft AMSL)	22-May-06		7-Aug-06	
				Water Level (ft AMSL)	Vertical Gradient (ft/ft downward) [2]	Water Level (ft AMSL)	Vertical Gradient (ft/ft downward) [2]
DSP-157S	516.59	506.59	511.59	516.07	0.184	515.84	0.169
DSP-157M	468.23	458.29	463.26	507.16		507.69	
DSP-158S	505.73	495.73	500.73	506.51	0.036	505.12	0.011
DSP-158M	461.97	451.97	456.97	504.92		504.66	
DSP-159S	511.27	501.27	506.27	509.09	0.059	508.94	0.056
DSP-159M	468.23	458.23	463.23	506.53		506.52	
MW-DN-101S	507.10	497.10	502.10	506.27	0.050	505.88	0.059
MW-DN-101I	477.08	467.08	472.08	504.77		504.12	
MW-DN-102S	511.98	501.98	506.98	513.63	0.035	513.88	0.051
MW-DN-102I	476.91	466.91	471.91	512.42		512.10	
MW-DN-103S	509.53	499.53	504.53	508.39	0.097	508.03	0.052
MW-DN-103I	488.93	478.93	483.93	506.39		506.96	
MW-DN-109S	506.29	496.29	501.29	509.42	-0.007	509.34	-0.009
MW-DN-109I	476.27	466.27	471.27	509.63		509.62	
MW-DN-110S	506.96	496.96	501.96	511.07	0.083	511.06	0.089
MW-DN-110I	476.14	466.14	471.14	508.51		508.32	
MW-DN-112S	509.72	504.72	507.22	NA	NA	514.11	0.153
MW-DN-112I	485.06	475.06	480.06	NA	NA	509.95	
MW-DN-113S	510.36	505.36	507.86	NA	NA	513.60	0.025
MW-DN-113I	478.33	468.33	473.33	NA	NA	512.74	
MW-DN-114S	485.76	475.76	480.76	NA	NA	507.70	-0.332
MW-DN-114I	471.71	466.71	469.21	NA	NA	511.54	
MW-DN-115S	491.89	486.89	489.39	NA	NA	509.22	-0.010
MW-DN-115I	470.88	460.88	465.88	NA	NA	509.46	
MW-DN-116S	494.40	489.40	491.90	NA	NA	504.28	0.032
MW-DN-116I	481.80	471.80	476.80	NA	NA	503.79	
MW-DN-119S	500.52	495.52	498.02	NA	NA	506.47	0.005
MW-DN-119I	486.45	476.45	481.45	NA	NA	506.38	
MW-DN-120S	483.85	473.85	478.85	NA	NA	504.22	0.004
MW-DN-120I	464.09	454.09	459.09	NA	NA	504.14	
MW-DN-122S	519.22	514.22	516.72	NA	NA	520.54	0.170
MW-DN-122I	492.73	482.73	487.73	NA	NA	515.61	
MW-DN-123S	498.98	493.98	496.48	NA	NA	494.85	-0.566
MW-DN-123I	478.71	468.71	473.71	NA	NA	507.73	
Average Vertical Gradient Across Site					0.067		-0.002

Notes:

(1) ft AMSL - feet above mean sea level
(2) Positive value denotes downward vertical gradient; negative value denotes upward vertical gradient
NA Elevation not available

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - TRITIUM IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Tritium (pCi/L)*	*Result Error*
DSP-105	WG-DN-DSP-DN-105-052306-JL-051		5/23/2006	319	+/-117
DSP-106	WG-DN-DSP-DN-106-052306-JL-052		5/23/2006	2370	+/-289
DSP-107	WG-DN-DSP-DN-107-052306-JL-053		5/23/2006	9820	+/-1030
DSP-108	WG-DN-DSP-DN-108-052406-JL-056		5/24/2006	1930	+/-244
DSP-117	WG-DN-DSP-117-052606-JH-015		5/26/2006	ND (200)	-
DSP-118	WG-DN-DSP-DN-118-052506-JL-057		5/25/2006	ND (200)	-
DSP-121	WG-DN-DSP-121-052606-JH-014		5/26/2006	ND (200)	-
DSP-122	WG-DN-DSP-DN-122-052506-JL-059		5/25/2006	1440	+/-139
DSP-123	WG-DN-DSP-DN-123-052606-JL-060		5/26/2006	13100	+/-318
DSP-123	WG-DN-DSP-DN-123-052606-JL-061	Duplicate (060)	5/26/2006	13200	+/-319
DSP-124	WG-DN-DSP-DN-124-052606-JL-062		5/26/2006	10000	+/-284
DSP-125	WG-DN-DSP-DN-125-060106-JL-078		6/1/2006	320	+/-127
DSP-126	WG-DN-DSP-126-052406-JH-004		5/24/2006	ND (200)	-
DSP-127	WG-DN-DSP-DN-127-053006-JL-066		5/30/2006	ND (200)	-
DSP-147	WG-DN-DSP-147-053006-JH-016		5/30/2006	ND (200)	-
DSP-148	WG-DN-DSP-148-053006-JH-017		5/30/2006	356	+/-111
DSP-149R	WG-DN-DSP-149R-053106-JH-019		5/31/2006	668	+/-144
DSP-149R	WG-DN-DSP-149R-053106-JH-020	Duplicate (019)	5/31/2006	694	+/-143
DSP-150	WG-DN-DSP-DN-150-052406-JL-054		5/24/2006	ND (200)	-
DSP-151	WG-DN-DSP-DN-151-052406-JL-055		5/24/2006	ND (200)	-
DSP-152	WG-DN-DSP-152-052306-JH-001		5/23/2006	ND (200)	-
DSP-153	WG-DN-DSP-153-052406-JH-005		5/24/2006	ND (200)	-
DSP-154	WG-DN-DSP-154-052506-JH-006		5/25/2006	ND (200)	-
DSP-155	WG-DN-DSP-DN-155-052506-JL-058		5/25/2006	ND (200)	-
DSP-156	WG-DN-DSP-156-053006-JH-018		5/30/2006	ND (200)	-
DSP-157M	WG-DN-DSP-157M-052306-JH-002		5/23/2006	ND (200)	-
DSP-157S	WG-DN-DSP-157S-052306-JH-003		5/23/2006	ND (200)	-
DSP-158M	WG-DN-DSP-158M-052506-JH-007		5/25/2006	ND (200)	-
DSP-158S	WG-DN-DSP-158S-052506-JH-008		5/25/2006	ND (200)	-
DSP-159M	WG-DN-DSP-159M-052506-JH-009		5/25/2006	531	+/-131
DSP-159S	WG-DN-DSP-159S-053106-JH-022		5/31/2006	ND (200)	-
MW-DN-101I	WG-DN-MW-DN-101I-052606-JL-064		5/26/2006	4570	+/-208
MW-DN-101S	WG-DN-MW-DN-101S-052606-JL-063		5/26/2006	220	+/-114
MW-DN-102I	WG-DN-MW-DN-102I-060106-JL-075		6/1/2006	1380	+/-195
MW-DN-102S	WG-DN-MW-DN-102S-060106-JL-076		6/1/2006	4250	+/-475
MW-DN-103I	WG-DN-MW-DN-103I-052606-JH-012		5/26/2006	ND (200)	-
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-010		5/26/2006	ND (200)	-
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-011	Duplicate (010)	5/26/2006	ND (200)	-
MW-DN-104S	WG-DN-MW-DN-104S-053006-JL-069		5/30/2006	ND (200)	-
MW-DN-105S	WG-DN-MW-DN-105S-060106-JL-077		6/1/2006	ND (200)	-
MW-DN-106S	WG-DN-MW-DN-106S-052606-JH-013		5/26/2006	ND (200)	-
MW-DN-107S	WG-DN-MW-DN-107S-053106-JL-074		5/31/2006	1040	+/-165
MW-DN-108I	WG-DN-MW-DN-108I-052606-JL-065		5/26/2006	ND (200)	-
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-022		8/14/2006	ND (200)	-
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-023	Duplicate (022)	8/14/2006	210	+/-124
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-070		5/31/2006	3620	+/-413
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-071	Duplicate (070)	5/31/2006	3750	+/-424
MW-DN-109S	WG-DN-MW-DN-109S-053106-JL-072		5/31/2006	251	+/-120
MW-DN-110I	WG-DN-MW-DN-110I-053006-JL-068		5/30/2006	516	+/-134
MW-DN-110S	WG-DN-MW-DN-110S-053006-JL-067		5/30/2006	ND (200)	-
MW-DN-111S	WG-DN-MW-DN-111S-053106-JL-073		5/31/2006	638	+/-140
MW-DN-112I	WG-DN-MW-DN-112I-081006-GL-014		8/10/2006	1520	+/-214
MW-DN-112S	WG-DN-MW-DN-112S-081006-GL-013		8/10/2006	ND (200)	-
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-009		8/9/2006	ND (200)	-
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-010	Duplicate (009)	8/9/2006	ND (200)	-
MW-DN-113S	WG-DN-MW-DN-113S-080906-GL-008		8/9/2006	451	+/-136

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - TRITIUM IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Tritium (pCi/L)*	*Result Error*
MW-DN-114I	WG-DN-MW-DN-114I-081406-GL-025		8/14/2006	4190	+/-473
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-020		8/11/2006	2770	+/-336
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-021	Duplicate (020)	8/11/2006	2740	+/-335
MW-DN-115I	WG-DN-MW-DN-115I-081106-GL-019		8/11/2006	ND (200)	-
MW-DN-115S	WG-DN-MW-DN-115S-081406-GL-024		8/14/2006	ND (200)	-
MW-DN-116I	WG-DN-MW-DN-116I-080906-GL-011		8/9/2006	4150	+/-468
MW-DN-116S	WG-DN-MW-DN-116S-080906-GL-012		8/9/2006	431	+/-135
MW-DN-117I	WG-DN-MW-DN-117I-081006-GL-015		8/10/2006	1030	+/-170
MW-DN-118S	WG-DN-MW-DN-118S-081006-GL-016		8/10/2006	1650	+/-227
MW-DN-119I	WG-DN-MW-DN-119I-081106-GL-018		8/11/2006	1470	+/-211
MW-DN-119S	WG-DN-MW-DN-119S-081106-GL-017		8/11/2006	ND (200)	-
MW-DN-120I	WG-DN-MW-DN-120I-080806-GL-006		8/8/2006	ND (200)	-
MW-DN-120S	WG-DN-MW-DN-120S-080806-GL-007		8/8/2006	ND (200)	-
MW-DN-121S	WG-DN-MW-DN-121S-080806-GL-003		8/8/2006	ND (200)	-
MW-DN-122I	WG-DN-MW-DN-122I-080806-GL-001		8/8/2006	ND (200)	-
MW-DN-122S	WG-DN-MW-DN-122S-080806-GL-002		8/8/2006	ND (200)	-
MW-DN-123I	WG-DN-MW-DN-123I-080806-GL-004		8/8/2006	ND (200)	-
MW-DN-123S	WG-DN-MW-DN-123S-080806-GL-026		8/8/2006	ND (200)	-

Notes:

Samples analyzed by: Teledyne Brown Engineering, Inc.
QC - Quality Control
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-105*	*DSP-105*	*DSP-106*	*DSP-106*	*DSP-107*	*DSP-107*
Sample Identification:		*WG-DN-DSP-DN-105-052306-JL-051*	*Result*	*WG-DN-DSP-DN-106-052306-JL-052*	*Result*	*WG-DN-DSP-DN-107-052306-JL-053*	*Result*
Sample Date:		*5/23/2006*	*Error*	*5/23/2006*	*Error*	*5/23/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-108*	*DSP-108*	*DSP-117*	*DSP-117*	*DSP-118*	*DSP-118*
Sample Identification:		*WG-DN-DSP-DN-108-052406-JL-056*	*Result*	*WG-DN-DSP-117-052606-JH-015*	*Result*	*WG-DN-DSP-DN-118-052506-JL-057*	*Result*
Sample Date:		*5/24/2006*	*Error*	*5/26/2006*	*Error*	*5/25/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-121*	*DSP-121*	*DSP-122*	*DSP-122*	*DSP-123*	*DSP-123*
Sample Identification:		*WG-DN-DSP-121-052606-JH-014*	*Result*	*WG-DN-DSP-DN-122-052506-JL-059*	*Result*	*WG-DN-DSP-DN-123-052606-JL-060*	*Result*
Sample Date:		*5/26/2006*	*Error*	*5/25/2006*	*Error*	*5/26/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	16.9	+/-8.458	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-123*	*DSP-123*	*DSP-124*	*DSP-124*	*DSP-125*	*DSP-125*
Sample Identification:		*WG-DN-DSP-DN-123-052606-JL-061*	*Result*	*WG-DN-DSP-DN-124-052606-JL-062*	*Result*	*WG-DN-DSP-DN-125-060106-JL-078*	*Result*
Sample Date:		*5/26/2006*	*Error*	*5/26/2006*	*Error*	*6/1/2006*	*Error*
		Duplicate					
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	74.95	+/-48.68	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-126*	*DSP-126*	*DSP-127*	*DSP-127*	*DSP-147*	*DSP-147*
Sample Identification:		*WG-DN-DSP-126-052406-JH-004*	*Result*	*WG-DN-DSP-DN-127-053006-JL-066*	*Result*	*WG-DN-DSP-147-053006-JH-016*	*Result*
Sample Date:		*5/24/2006*	*Error*	*5/30/2006*	*Error*	*5/30/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	61.32	+/-12.11	RNI	-	RNI	-
Potassium-40	pCi/L	64.41	+/-42.33	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-148*	*DSP-148*	*DSP-149R*	*DSP-149R*	*DSP-149R*	*DSP-149R*
Sample Identification:		*WG-DN-DSP-148-053006-JH-017*	*Result*	*WG-DN-DSP-149R-053106-JH-019*	*Result*	*WG-DN-DSP-149R-053106-JH-020*	*Result*
Sample Date:		*5/30/2006*	*Error*	*5/31/2006*	*Error*	*5/31/2006*	*Error*
						Duplicate	
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-150*	*DSP-150*	*DSP-151*	*DSP-151*	*DSP-152*	*DSP-152*
Sample Identification:		*WG-DN-DSP-DN-150-052406-JL-054*	*Result*	*WG-DN-DSP-DN-151-052406-JL-055*	*Result*	*WG-DN-DSP-152-052306-JH-001*	*Result*
Sample Date:		*5/24/2006*	*Error*	*5/24/2006*	*Error*	*5/23/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-153*	*DSP-153*	*DSP-154*	*DSP-154*	*DSP-155*	*DSP-155*
Sample Identification:		*WG-DN-DSP-153-052406-JH-005*	*Result*	*WG-DN-DSP-154-052506-JH-006*	*Result*	*WG-DN-DSP-DN-155-052506-JL-058*	*Result*
Sample Date:		*5/24/2006*	*Error*	*5/25/2006*	*Error*	*5/25/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10) U*	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-156*	*DSP-156*	*DSP-157M*	*DSP-157M*	*DSP-157S*	*DSP-157S*
Sample Identification:		*WG-DN-DSP-156-053006-JH-018*	*Result*	*WG-DN-DSP-157M-052306-JH-002*	*Result*	*WG-DN-DSP-157S-052306-JH-003*	*Result*
Sample Date:		*5/30/2006*	*Error*	*5/23/2006*	*Error*	*5/23/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30) U*	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	121.4	+/-68.44	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-158M*	*DSP-158M*	*DSP-158S*	*DSP-158S*	*DSP-159M*	*DSP-159M*
Sample Identification:		*WG-DN-DSP-158M-052506-JH-007*	*Result*	*WG-DN-DSP-158S-052506-JH-008*	*Result*	*WG-DN-DSP-159M-052506-JH-009*	*Result*
Sample Date:		*5/25/2006*	*Error*	*5/25/2006*	*Error*	*5/25/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10) U*	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	165.1	+/-26.11	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	15.75	+/-6.047	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.
- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*DSP-159S*	*DSP-159S*	*MW-DN-101I*	*MW-DN-101I*	*MW-DN-101S*	*MW-DN-101S*
Sample Identification:		*WG-DN-DSP-159S-053106-JH-022*	*Result*	*WG-DN-MW-DN-101I-052606-JL-064*	*Result*	*WG-DN-MW-DN-101S-052606-JL-063*	*Result*
Sample Date:		*5/31/2006*	*Error*	*5/26/2006*	*Error*	*5/26/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	8.284	+/-4.883	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-102I*	*MW-DN-102I*	*MW-DN-102S*	*MW-DN-102S*	*MW-DN-103I*	*MW-DN-103I*
Sample Identification:		*WG-DN-MW-DN-102I-060106-JL-075*	*Result*	*WG-DN-MW-DN-102S-060106-JL-076*	*Result*	*WG-DN-MW-DN-1031-052606-JH-012*	*Result*
Sample Date:		*6/1/2006*	*Error*	*6/1/2006*	*Error*	*5/26/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-103S*	*MW-DN-103S*	*MW-DN-103S*	*MW-DN-103S*	*MW-DN-104S*	*MW-DN-104S*
Sample Identification:		*WG-DN-MW-DN-103S-052606-JH-010*	*Result*	*WG-DN-MW-DN-103S-052606-JH-011*	*Result*	*WG-DN-MW-DN-104S-053006-JL-069*	*Result*
Sample Date:		*5/26/2006*	*Error*	*5/26/2006*	*Error*	*5/30/2006*	*Error*
				Duplicate			
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-105S*	*MW-DN-105S*	*MW-DN-106S*	*MW-DN-106S*	*MW-DN-107S*	*MW-DN-107S*
Sample Identification:		*WG-DN-MW-DN-105S-060106-JL-077*	*Result*	*WG-DN-MW-DN-106S-052606-JH-013*	*Result*	*WG-DN-MW-DN-107S-053106-JL-074*	*Result*
Sample Date:		*6/1/2006*	*Error*	*5/26/2006*	*Error*	*5/31/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-108I*	*MW-DN-108I*	*MW-DN-108I*	*MW-DN-108I*	*MW-DN-108I*	*MW-DN-108I*
Sample Identification:		*WG-DN-MW-DN-108I-052606-JL-065*	*Result*	*WG-DN-MW-DN-108I-052606-JL-065*	*Result*	*WG-DN-MW-DN-108I-081406-GL-022*	*Result*
Sample Date:		*5/26/2006*	*Error*	*5/26/2006*	*Error*	*8/14/2006*	*Error*
				Re-run			
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	NA	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	NA	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	NA	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	NA	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	NA	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	NA	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	NA	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	NA	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	NA	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	4.42	+/-1.23	3.39	+/-0.774	3.21 (2)	+/-1
Strontium-90	pCi/L	4.37	+/-0.66	2.72	+/-1.29	4.74 (2)	+/-2.45
Zinc-65	pCi/L	ND (30) U*	-	NA	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	NA	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-108I*	*MW-DN-108I*	*MW-DN-109I*	*MW-DN-109I*	*MW-DN-109I*	*MW-DN-109I*
Sample Identification:		*WG-DN-MW-DN-108I-081406-GL-023*	*Result*	*WG-DN-MW-DN-109I-053106-JL-070*	*Result*	*WG-DN-MW-DN-109I-053106-JL-071*	*Result*
Sample Date:		*8/14/2006*	*Error*	*5/31/2006*	*Error*	*5/31/2006*	*Error*
		Duplicate				*Duplicate*	
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10) U*	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	2.72	+/-1.01	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	2.17	+/-0.783	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-109S*	*MW-DN-109S*	*MW-DN-110I*	*MW-DN-110I*	*MW-DN-110S*	*MW-DN-110S*
Sample Identification:		*WG-DN-MW-DN-109S-053106-JL-072*	*Result*	*WG-DN-MW-DN-110I-053006-JL-068*	*Result*	*WG-DN-MW-DN-110S-053006-JL-067*	*Result*
Sample Date:		*5/31/2006*	*Error*	*5/30/2006*	*Error*	*5/30/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30) U*	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-111S*	*MW-DN-111S*	*MW-DN-112I*	*MW-DN-112I*	*MW-DN-112S*	*MW-DN-112S*
Sample Identification:		*WG-DN-MW-DN-111S-053106-JL-073*	*Result*	*WG-DN-MW-DN-112I-081006-GL-014*	*Result*	*WG-DN-MW-DN-112S-081006-GL-013*	*Result*
Sample Date:		*5/31/2006*	*Error*	*8/10/2006*	*Error*	*8/10/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-113I*	*MW-DN-113I*	*MW-DN-113I*	*MW-DN-113I*	*MW-DN-113S*	*MW-DN-113S*
Sample Identification:		*WG-DN-MW-DN-113I-080906-GL-009*	*Result*	*WG-DN-MW-DN-113I-080906-GL-010*	*Result*	*WG-DN-MW-DN-113S-080906-GL-008*	*Result*
Sample Date:		*8/9/2006*	*Error*	*8/9/2006*	*Error*	*8/9/2006*	*Error*
				Duplicate			
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10) U*	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30) U*	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	59.93	+/-35.54	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-114I*	*MW-DN-114I*	*MW-DN-114S*	*MW-DN-114S*	*MW-DN-114S*	*MW-DN-114S*
Sample Identification:		*WG-DN-MW-DN-114I-081406-GL-025*	*Result*	*WG-DN-MW-DN-114S-081106-GL-020*	*Result*	*WG-DN-MW-DN-114S-081106-GL-021*	*Result*
Sample Date:		*8/14/2006*	*Error*	*8/11/2006*	*Error*	*8/11/2006*	*Error*
						Duplicate	
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-115I*	*MW-DN-115I*	*MW-DN-115S*	*MW-DN-115S*	*MW-DN-116I*	*MW-DN-116I*
Sample Identification:		*WG-DN-MW-DN-115I-081106-GL-019*	*Result*	*WG-DN-MW-DN-115S-081406-GL-024*	*Result*	*WG-DN-MW-DN-116I-080906-GL-011*	*Result*
Sample Date:		*8/11/2006*	*Error*	*8/14/2006*	*Error*	*8/9/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-116S*	*MW-DN-116S*	*MW-DN-117I*	*MW-DN-117I*	*MW-DN-118S*	*MW-DN-118S*
Sample Identification:		*WG-DN-MW-DN-116S-080906-GL-012*	*Result*	*WG-DN-MW-DN-117I-081006-GL-015*	*Result*	*WG-DN-MW-DN-118S-081006-GL-016*	*Result*
Sample Date:		*8/9/2006*	*Error*	*8/10/2006*	*Error*	*8/10/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-119I*	*MW-DN-119I*	*MW-DN-119S*	*MW-DN-119S*	*MW-DN-120I*	*MW-DN-120I*
Sample Identification:		*WG-DN-MW-DN-119I-081106-GL-018*	*Result*	*WG-DN-MW-DN-119S-081106-GL-017*	*Result*	*WG-DN-MW-DN-120I-080806-GL-006*	*Result*
Sample Date:		*8/11/2006*	*Error*	*8/11/2006*	*Error*	*8/8/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	102.5	+/-50.21
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-120S*	*MW-DN-120S*	*MW-DN-121S*	*MW-DN-121S*	*MW-DN-122I*	*MW-DN-122I*
Sample Identification:		*WG-DN-MW-DN-120S-080806-GL-007*	*Result*	*WG-DN-MW-DN-121S-080806-GL-003*	*Result*	*WG-DN-MW-DN-122I-080806-GL-001*	*Result*
Sample Date:		*8/8/2006*	*Error*	*8/8/2006*	*Error*	*8/8/2006*	*Error*
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10) U*	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-	NA	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Actinium-228	pCi/L	RNI	-	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-	104.2	+/-48.34
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	18.26	+/-7.47	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound / Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*MW-DN-122S*	*MW-DN-122S*	*MW-DN-123I*	*MW-DN-123I*
Sample Identification:		*WG-DN-MW-DN-122S-080806-GL-002*	*Result*	*WG-DN-MW-DN-123I-080806-GL-004*	*Result*
Sample Date:		*8/8/2006*	*Error*	*8/8/2006*	*Error*
	Units				
Target Radionuclides					
Barium-140	pCi/L	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10) U*	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-
Strontium-90	pCi/L	NA	-	NA	-
Zinc-65	pCi/L	ND (30) U*	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)					
Actinium-228	pCi/L	RNI	-	RNI	-
Potassium-40	pCi/L	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-
Thorium-228	pCi/L	12.67	+/-7.215	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown

(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

(2) - These sample results were considered invalid since the Strontium-89/90 (Total) was less than the Strontium-90

RNI- Radionuclide Not Identified during analysis.

NA - Data not available or not analyzed.

ND ( ) - Non-detect; value in parentheses is the LLD.

LLD - Lower limit of detection.

U* - Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds Minimum Detectable Concentration and 3 sigma.

- - Non-detect value, +/- value not reported.

TABLE 5.4

ANALYTICAL RESULTS SUMMARY - TRITIUM IN SURFACE WATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Tritium (pCi/L)*	*Result Result Error*
SW-DN-101	WS-DN-SW-101-053106-JH-023		5/31/2006	ND (200)	-
SW-DN-102	WS-DN-SW-102-053106-JH-024		5/31/2006	ND (200)	-
SW-DN-103	WS-DN-SW-103-053106-JH-021		5/31/2006	ND (200)	-
SW-DN-104	WS-DN-SW-104-060106-JH-026		6/1/2006	ND (200)	-
SW-DN-105	WS-DN-SW-105-060106-JH-025		6/1/2006	ND (200)	-
SW-DN-106	WS-DN-SW-106-060106-JH-027		6/1/2006	ND (200)	-
SW-DN-106	WS-DN-SW-106-060106-JH-028	Duplicate (027)	6/1/2006	ND (200)	-

Notes:

Samples analyzed by: Teledyne Brown Engineering, Inc.
QC - Quality Control
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.5

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN SURFACE WATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*SW-DN-101*	*SW-DN-101*	*SW-DN-102*	*SW-DN-102*	*SW-DN-103*	*SW-DN-103*	*SW-DN-104*
Sample Identification:		*WS-DN-SW-101-053106-JH-023*	*Result*	*WS-DN-SW-102-053106-JH-024*	*Result*	*WS-DN-SW-103-053106-JH-021*	*Result*	*WS-DN-SW-104-060106-JH-026*
Sample Date:		*5/31/2006*	*Error*	*5/31/2006*	*Error*	*5/31/2006*	*Error*	*6/1/2006*
	Units							
Target Radionuclides								
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-	ND (60)
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-	ND (18)
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-	ND (30)
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-	ND (2)
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-	ND (30)
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)
Non-Target Radionuclides (1)								
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-	RNI

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.5

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN SURFACE WATER
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location:		*SW-DN-104*	*SW-DN-105*	*SW-DN-105*	*SW-DN-106*	*SW-DN-106*	*SW-DN-106*	*SW-DN-106*
Sample Identification:		*Result*	*WS-DN-SW-105-060106-JH-025*	*Result*	*WS-DN-SW-106-060106-JH-027*	*Result*	*WS-DN-SW-106-060106-JH-028*	*Result*
Sample Date:		*Error*	*6/1/2006*	*Error*	*6/1/2006*	*Error*	*6/1/2006*	*Error*
							Duplicate	
	Units							
Target Radionuclides								
Barium-140	pCi/L	-	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	-	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	-	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	-	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	-	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	-	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	-	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	-	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	-	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	-	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	-	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	-	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)								
Potassium-40	pCi/L	-	84.3	+/-42.86	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

APPENDIX A

MONITORING WELL LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-101I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	520.48 517.08					
0	Overburden, not logged. Cleared using soft dig.		Concrete Surface Seal				
2							
4							
6							
8	END OF OVERBURDEN HOLE @ 8.0ft BGS		6" Ø Borehole				
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-101I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
8	SANDSTONE - hard, moist to wet, yellowish brown, changing to light gray	509.08	6" Ø Borehole; Bentonite Chip Seal; 2" Ø PVC Well Casing			
32	LIMESTONE - hard, moist, light gray	484.08	2" Ø PVC Well Casing			
34	LIMESTONE - transitional zone limestone interbedded with shale and sandstone	482.08	Bentonite Chip Seal			
40						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-101I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42			6" Ø Borehole			
44			#10 Silica Sand Pack			
46			2" Ø PVC Well Screen			
48	SHALE - hard very moist, pale green - greenish gray at 48.0ft BGS	470.08				
50	END OF BOREHOLE @ 50.0ft BGS	467.08				
52						
54						
56						
58						
60						
62						
64						
66						
68						
70						
72						
74						

WELL DETAILS
Screened interval:
477.08 to 467.08ft AMSL
40.00 to 50.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
516.08 to 479.08ft AMSL
1.00 to 38.00ft BGS
Material: Bentonite Chips
Sand Pack:
479.08 to 467.08ft AMSL
38.00 to 50.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-101S
DATE COMPLETED: May 5, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: K. Duwal

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	520.30 517.10					
0	Overburden not logged, cleared by soft dig. Rock/gravel Fill		Concrete Surface Seal Bentonite Chip Seal 2" Ø PVC Well Casing 6" Ø Borehole				
8	END OF OVERBURDEN HOLE @ 8.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-101S
DATE COMPLETED: May 5, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: K. Duwal

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
8			6" Ø Borehole			
	SANDSTONE, tan/gray	509.10				
10						
12			#10 Silica Sand Pack			
14				1	AR	
16			2" Ø PVC Well Screen			
18						
20	END OF BOREHOLE @ 20.0ft BGS	497.10				
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						

WELL DETAILS
Screened interval:
507.10 to 497.10ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: Sch 40 PVC
Seal:
516.10 to 510.60ft AMSL
1.00 to 6.50ft BGS
Material: Bentonite Chips
Sand Pack:
510.60 to 497.10ft AMSL
6.50 to 20.00ft BGS
Material: Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-102I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GROUND SURFACE TOP OF CASING	516.91 516.63					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal				
2							
4							
6							
8	END OF OVERBURDEN HOLE @ 8.0ft BGS		6" Ø Borehole				
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-102I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
8	SANDSTONE - hard, moist to very moist, light gray, trace mica	508.91	6" Ø Borehole; Bentonite Chip Seal; 2" Ø PVC Well Casing			
22	LIMESTONE - hard, moist, light gray	495.41				
38	LIMESTONE - transitional zone, limestone with shale interbedded	478.91				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-102I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42			6" ∅ Borehole			
44			#10 Silica Sand Pack			
46			2" ∅ PVC Well Screen			
48						
50	SHALE - hard, very moist, pale green to grayish green	467.91	Cave			
52	END OF BOREHOLE @ 51.0ft BGS	465.91				
54						
56						
58						
60						
62						
64						
66						
68						
70						
72						
74						

WELL DETAILS
Screened interval:
476.91 to 466.91ft AMSL
40.00 to 50.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: Sch 40 PVC
Seal:
515.91 to 478.91ft AMSL
1.00 to 38.00ft BGS
Material: Bentonite Chips
Sand Pack:
478.91 to 466.91ft AMSL
38.00 to 50.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-102S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig/Tricone
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GROUND SURFACE TOP OF CASING	516.98 516.68					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal 6" Ø Borehole 2" Ø PVC Well Casing				
8	END OF OVERBURDEN HOLE @ 8.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-102S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig/Tricone
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
8	SANDSTONE - hard, moist to very moist, dark brown changing to yellowish brown changing to light gray	508.98	2" Ø PVC Well Casing #10 Silica Sand Pack 2" Ø PVC Well Screen			
16	END OF BOREHOLE @ 15.0ft BGS	501.98	WELL DETAILS Screened interval: 511.98 to 501.98ft AMSL 5.00 to 15.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: Sch 40 PVC Seal: 515.98 to 512.98ft AMSL 1.00 to 4.00ft BGS Material: Bentonite Chips Sand Pack: 512.98 to 501.98ft AMSL 4.00 to 15.00ft BGS Material: #10 Silica Sand			

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-103I
DATE COMPLETED: May 2, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	522.72 520.13					
0	Overburden not logged. Cleared for utilities using soft dig.		Concrete Surface Seal				
2							
4	END OF OVERBURDEN HOLE @ 3.5ft BGS		6" Ø Borehole				
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-103I
DATE COMPLETED: May 2, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
4	SANDSTONE - tan changing to gray, trace mica, moist to very moist	516.63	6" Ø Borehole			
6						
8						
10			Bentonite Chip Seal			
12	- becoming harder at 12.5ft BGS					
14						
16			2" Ø PVC Well Casing			
18						
20						
22	LIMESTONE - hard, light gray, moist	497.63				
24						
26						
28						
30			#10 Silica Sand Pack			
32						
34			2" Ø PVC Well Screen			
36						
38	- wet at 38.0ft BGS					
40	LIMESTONE - transitional zone, Limestone and Shale interbedded, less dense	480.63				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-103I
DATE COMPLETED: May 2, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
44	- water not present in cuttings at 42.0ft BGS		6" Ø Borehole			
	SHALE - hard, dark greenish gray, moist	475.13				
46						
48						
50						
52			#10 Silica Sand Pack			
54						
56						
58						
60						
62	END OF BOREHOLE @ 62.0ft BGS	458.13				
64						
66						
68						
70						
72						
74						
76						
78						
80						

WELL DETAILS
Screened interval:
488.93 to 478.93ft AMSL
31.20 to 41.20ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
519.13 to 492.13ft AMSL
1.00 to 28.00ft BGS
Material: Bentonite Chips
Sand Pack:
492.13 to 458.13ft AMSL
28.00 to 62.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-103S
DATE COMPLETED: May 3, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	522.12 519.53					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal				
4	END OF OVERBURDEN HOLE @ 3.4ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/19/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-103S
DATE COMPLETED: May 3, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
4	SANDSTONE - hard, light brown, moist to very moist	516.13	Bentonite Chip Seal			
6	- yellowish brown at 4.5ft BGS - light brown at 6.0ft BGS		2" Ø PVC Well Casing			
8			6" Ø Borehole			
10						
12	- dark brown, trace mica at 12.5ft BGS		#10 Silica Sand Pack			
14						
16	- light gray at 16.5ft BGS					
18			2" Ø PVC Well Screen			
20	END OF BOREHOLE @ 20.0ft BGS	499.53				
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

WELL DETAILS
Screened interval:
509.53 to 499.53ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
518.53 to 513.53ft AMSL
1.00 to 6.00ft BGS
Material: Bentonite Chips
Sand Pack:
513.53 to 499.53ft AMSL
6.00 to 20.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-104S
DATE COMPLETED: May 9, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: N. Kuhl

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GROUND SURFACE TOP OF CASING	516.60 516.38					
0	Overburden, not logged. Cleared using soft dig.		Concrete Surface Seal				
4	END OF OVERBURDEN HOLE @ 4.5ft BGS		Bentonite				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/19/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

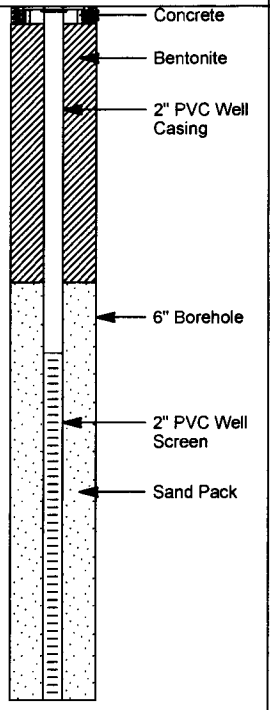
PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-104S
DATE COMPLETED: May 9, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: N. KUHL

NORTHING: 1720545.8
EASTING: 1001497.04

GROUND SURFACE ELEV. ft AMSL: 516.60
TOP OF CASING ELEV. ft AMSL: 516.38

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	SANDSTONE - orange	
20	END OF BOREHOLE @ 20.0ft BGS	496.60



WELL DETAILS
Screened interval:
506.60 to 496.60ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
515.60 to 508.60ft AMSL
1.00 to 8.00ft BGS
Material: Bentonite Chips
Sand Pack:
508.60 to 496.60ft AMSL
8.00 to 20.00ft BGS
Material: #3 Sand

RUN NUMBER | CORE RECOVERY % | RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-105S
DATE COMPLETED: May 5, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: K. Duwal

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	516.68 516.52					
0	Gravel and Rock Fill below asphalt		Concrete Surface Seal Bentonite Chip Seal				
3	END OF OVERBURDEN HOLE @ 3.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-105S
DATE COMPLETED: May 5, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: K. Duwal

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
0		513.52	Bentonite Chip Seal			
4	SANDSTONE - light to dark gray with tan					
6			2" Ø PVC Well Casing			
8			6" Ø Borehole			
10						
12						
14			#10 Silica Sand Pack			
16						
18			2" Ø PVC Well Screen			
20	END OF BOREHOLE @ 20.0ft BGS	496.52				
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

WELL DETAILS
Screened interval:
506.52 to 496.52ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
515.52 to 510.02ft AMSL
1.00 to 6.50ft BGS
Material: Bentonite Chips
Sand Pack:
510.02 to 496.52ft AMSL
6.50 to 20.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-106S
DATE COMPLETED: May 3, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	516.42 513.88					
2	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal				
	END OF OVERBURDEN HOLE @ 2.5ft BGS						
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							

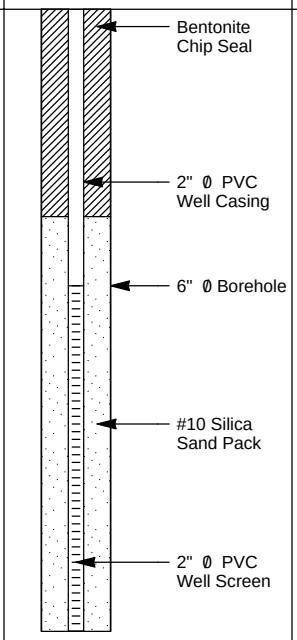
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-106S
DATE COMPLETED: May 3, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
4	SANDSTONE - hard, moist to very moist, yellowish brown, changes to light gray	511.38	Bentonite Chip Seal 2" Ø PVC Well Casing 6" Ø Borehole #10 Silica Sand Pack 2" Ø PVC Well Screen			
20	END OF BOREHOLE @ 20.0ft BGS	493.88				



WELL DETAILS
Screened interval:
503.88 to 493.88ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
512.88 to 505.88ft AMSL
1.00 to 8.00ft BGS
Material: Bentonite Chips
Sand Pack:
505.88 to 493.88ft AMSL
8.00 to 20.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-107S
DATE COMPLETED: May 15, 2006
DRILLING METHOD: Vacuum Truck
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	518.23 516.63					
0	SM SAND with silt, trace fine grained angular gravel, loose, medium brown, moist		Concrete Surface Seal 2" Ø PVC Well Casing Bentonite Chip Seal				
2							
			6" Ø Borehole				
4			#10 Silica Sand Pack				
	- wet at 5.0ft BGS						
6			2" Ø PVC Well Screen				
			Cave				
8	END OF BOREHOLE @ 8.0ft BGS	508.63					
10							

WELL DETAILS
Screened interval:
515.13 to 510.13ft AMSL
1.50 to 6.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
516.13 to 515.13ft AMSL
0.50 to 1.50ft BGS
Material: Bentonite Chips
Sand Pack:
515.13 to 510.13ft AMSL
1.50 to 6.50ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-108I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GROUND SURFACE 517.49 TOP OF CASING 517.14						
0	SP - Sand, trace silt, trace clay		Concrete Surface Seal				
2							
4							
6			6" Ø Borehole				
8							
10			Bentonite Chip Seal				
12							
14							
16							
18							
20			2" Ø PVC Well Casing				
22							
24							
26	END OF OVERBURDEN HOLE @ 26.0ft BGS						
28							
30							
32							
34							
36							
38							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-108I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
26	SANDSTONE - moist to very moist, hard, gray	491.49				
28						
30						
32			Natural Collapse From Overburden			
34	LIMESTONE (transitional zone) - hard, light gray, moist, strace sandstone interbedded	484.49				
36	- sandstone interbedding not present, harder at 36.0ft BGS					
38	- with sandstone interbedding, softer at 38.0ft BGS		2" Ø PVC Well Casing			
40	- harder, mix of limestone, sandstone and trace chert at 38.5ft BGS					
42			2" Ø PVC Well Screen			
44						
46						
48	SHALE - trace sandstone, trace limestone, pale green, hard - gray at 48.0ft BGS	469.99				
50						
52			6" Ø Borehole			
54						
56			Natural Collapse From Overburden			
58						
60						
62	END OF BOREHOLE @ 62.0ft BGS	455.49				

WELL DETAILS
Screened interval:

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-108I
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
66			477.49 to 467.49ft AMSL 40.00 to 50.00ft BGS Length: 10ft Diameter: 1in Slot Size: 10 Material: PVC Seal: 516.49 to 487.49ft AMSL 1.00 to 30.00ft BGS Material: Bentonite Chips Sand Pack: 487.49 to 467.49ft AMSL 30.00 to 50.00ft BGS Material: Natural Collapse used as filter pack from overburden				
68							
70							
72							
74							
76							
78							
80							
82							
84							
86							
88							
90							
92							
94							
96							
98							
100							
102							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-109I
DATE COMPLETED: May 9, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: N. Kuhl

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	516.31 516.27					
2	Overburden, not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal				
	END OF OVERBURDEN HOLE @ 2.5ft BGS						
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

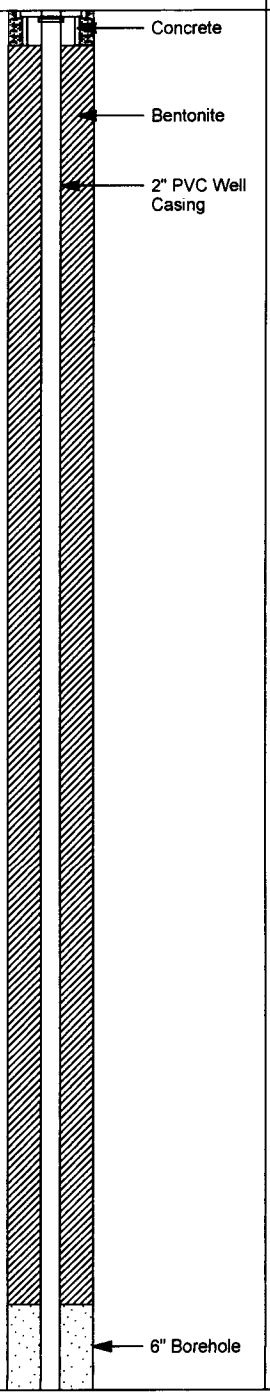
PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-109I
DATE COMPLETED: May 9, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: N. KUHL

NORTHING: 1720244.36
EASTING: 1001238.2

TOP OF CASING 516.31
GROUND SURFACE 516.27

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	SANDSTONE - orange	
8	SANDSTONE - gray	508.27
18	- wet at 18.5ft BGS	
28	LIMESTONE - gray	487.27
38		



Monitoring Well

RUN NUMBER | CORE RECOVERY % | RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-109I
DATE COMPLETED: May 9, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42						
44			2" PVC Well Screen			
		471.27	Sand Pack			
46	SHALE - soft, dark gray					
48						
50						
		465.27				
52	END OF BOREHOLE @ 51.0ft BGS					
54						
56						
58						
60						
62						
64						
66						
68						
70						
72						
74						
76						
78						

WELL DETAILS
Screened interval:
476.27 to 466.27ft AMSL
40.00 to 50.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
515.27 to 478.77ft AMSL
1.00 to 37.50ft BGS
Material: Bentonite Chips
Sand Pack:
478.77 to 465.27ft AMSL
37.50 to 51.00ft BGS
Material: #3 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-109S
DATE COMPLETED: May 9, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: N. Kuhl

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	516.32 516.29					
2	Overburden, not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal				
	END OF OVERBURDEN HOLE @ 2.5ft BGS						
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/19/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-109S
DATE COMPLETED: May 9, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	NORTHING: 1720244.12 EASTING: 1001233.26 TOP OF CASING GROUND SURFACE	516.32 516.29				
0	SANDSTONE - orange		Concrete			
2			Bentonite			
4			2" PVC Well Casing			
6						
8		508.29				
	SANDSTONE - gray		6" Borehole			
10						
12			2" PVC Well Screen			
14			Sand Pack			
16						
18						
20		496.29				
	END OF BOREHOLE @ 20.0ft BGS					
22						
24						
26						
28						
30						
32						
34						
36						
38						

WELL DETAILS
Screened interval:
506.29 to 496.29ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Seal:
515.29 to 508.29ft AMSL
1.00 to 8.00ft BGS
Material: Bentonite Chips
Sand Pack:
508.29 to 496.29ft AMSL
8.00 to 20.00ft BGS
Material: #3 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-110I
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	517.41 517.34					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal				
2							
4							
6			6" ∅ Borehole				
	END OF OVERBURDEN HOLE @ 6.0ft BGS						
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-110I
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
6	SANDSTONE - hard, moist to very moist, light gray, trace mica	511.34	6" Ø Borehole; Bentonite Chip Seal; 2" Ø PVC Well Casing			
32	LIMESTONE - hard, light gray, moist to very moist	485.34				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

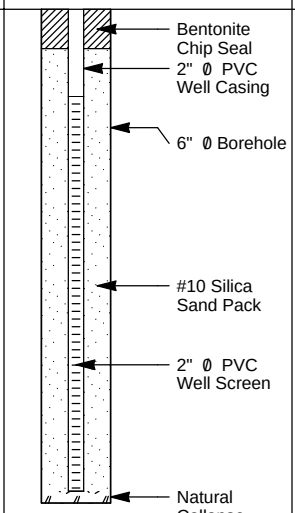
BEDROCK LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-110I
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
40						
42						
44	LIMESTONE - transitional zone. Limestone interbedded with shale; trace chert, trace sandstone	473.34				
46						
48						
50	SHALE - hard, greenish gray, very moist	466.84				
52	END OF BOREHOLE @ 51.5ft BGS	465.84				
54						
56						
58						
60						
62						
64						
66						
68						
70						
72						



WELL DETAILS
Screened interval:
476.14 to 466.14ft AMSL
41.20 to 51.20ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
516.34 to 477.34ft AMSL
1.00 to 40.00ft BGS
Material: Bentonite Chips
Sand Pack:
477.34 to 466.14ft AMSL
40.00 to 51.20ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-110S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	TOP OF RISER GROUND SURFACE	517.28 517.16					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal 2" Ø PVC Well Casing				
6	END OF OVERBURDEN HOLE @ 6.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 45136-23-N REDWOOD WLOO.GPJ CRA_CORP.GDT 6/13/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-110S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
6	SANDSTONE - hard, moist to very moist, light gray	511.16	2" Ø PVC Well Casing 6" Ø Borehole #10 Silica Sand Pack 2" Ø PVC Well Screen			
20	END OF BOREHOLE @ 20.2ft BGS	496.96				

WELL DETAILS
Screened interval:
506.96 to 496.96ft AMSL
10.20 to 20.20ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
516.16 to 511.16ft AMSL
1.00 to 6.00ft BGS
Material: Bentonite Chips
Sand Pack:
511.16 to 496.96ft AMSL
6.00 to 20.20ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-111S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
	GROUND SURFACE TOP OF CASING	517.19 516.63					
0	Overburden not logged. Cleared using soft dig.		Concrete Surface Seal Bentonite Chip Seal 2" Ø PVC Well Casing 6" Ø Borehole				
10	END OF OVERBURDEN HOLE @ 10.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-111S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 6" Air Rotary - Barber Rig
FIELD PERSONNEL: D. Deitner

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
10	SANDSTONE - hard, moist to very moist, yellowish brown then changing to light gray	507.19	6" Ø Borehole #10 Silica Sand Pack 2" Ø PVC Well Screen			
20	END OF BOREHOLE @ 20.0ft BGS	497.19				

WELL DETAILS
Screened interval:
507.19 to 497.19ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Seal:
516.19 to 510.19ft AMSL
1.00 to 7.00ft BGS
Material: Bentonite Chips
Sand Pack:
510.19 to 497.19ft AMSL
7.00 to 20.00ft BGS
Material: #10 Silica Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-112I
DATE COMPLETED: July 20, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. WINTERINK

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.56 516.22				
0	GRAVEL/SAND, overburden		Concrete			
2	SANDSTONE, orange, thick, medium grain	515.06				
4						
6			6" Borehole			
8	- wet at 8.0ft BGS					
10	Limestone, gray, weak	506.56	Cement Grout			
12						
14						
16						
18						
20			2" PVC Well Casing			
22						
24						
26	- some black fines at 25.0ft BGS					
28			Bentonite Pellets			
30						
32	- gray/white, hard at 31.0ft BGS					
34			Sand Pack			
36			2" PVC Well Screen			
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-112I
DATE COMPLETED: July 20, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. WINTERINK

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42	SHALE, green, soft	476.56					
	END OF BOREHOLE @ 41.5ft BGS	475.06	WELL DETAILS Screened interval: 485.06 to 475.06ft AMSL 31.50 to 41.50ft BGS Length: 10ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 487.06 to 475.06ft AMSL 29.50 to 41.50ft BGS Material: #7 Sand				
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

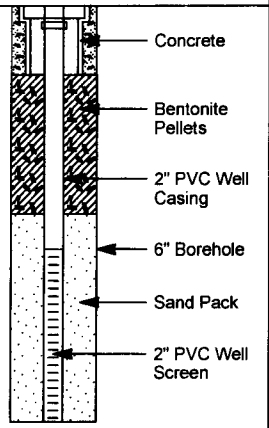
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-112S
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. WINTERINK

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.72 516.35				
0	GRAVEL/SAND, overburden (soft dig)					
2	SANDSTONE, orange, thick, medium grain	515.22				
8	- wet at 8.0ft BGS					
12	LIMESTONE, gray	505.72				
	END OF BOREHOLE @ 12.0ft BGS	504.72				



WELL DETAILS
Screened interval:
509.72 to 504.72ft AMSL
7.00 to 12.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
510.72 to 504.72ft AMSL
6.00 to 12.00ft BGS
Material: #7 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-113I
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. WINTERINK

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.33 516.13				
0	GRAVEL, overburden, wet		Concrete			
2	SANDSTONE, orange, very weak, fine grained	514.33				
4						
6			6" Borehole			
8						
10			Cement Grout			
12	LIMESTONE, gray, monderately hard, schistose	505.33				
14						
16						
18						
20			2" PVC Well Casing			
22						
24						
26	- black material, fine grained, bedding plane at 25.0ft BGS					
28						
30	LIMESTONE, light gray, strong, with seams of green shalestone	486.33				
32						
34			Bentonite Pellets			
36			Sand Pack			
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-113I
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. WINTERINK

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42	SHALESTONE, dark gray/green, soft	474.33	2" PVC Well Screen			
48	END OF BOREHOLE @ 48.0ft BGS	468.33	WELL DETAILS Screened interval: 478.33 to 468.33ft AMSL 38.00 to 48.00ft BGS Length: 10ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 480.33 to 468.33ft AMSL 36.00 to 48.00ft BGS Material: #7 Sand			

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-113S
DATE COMPLETED: July 24, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.36 516.13				
0	SAND and GRAVEL (Fill), coarse sand, fine-coarse gravel		Concrete			
2	SANDSTONE, light gray, fine grained, soft, loose	514.36	Bentonite Pellets			
4			2" PVC Well Casing			
6			6" Borehole			
8			Sand Pack			
10		505.36	2" PVC Well Screen			
12	END OF BOREHOLE @ 11.0ft BGS					
14						
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						

WELL DETAILS
Screened interval:
510.36 to 505.36ft AMSL
6.00 to 11.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
512.36 to 505.36ft AMSL
4.00 to 11.00ft BGS
Material: 20/40 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-114I
DATE COMPLETED: July 31, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER/K. DUWAL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER GROUND SURFACE	519.97 519.71				
0	Overburden removed by air knife		Concrete			
2						
4						
6						
8	SANDSTONE, brown, wet, strong diesel odor	512.71				
10	- no diesel odor at 9.0ft BGS		6" Borehole			
12						
14						
16						
18						
20			Bentonite Grout			
22						
24						
26						
28						
30			2" PVC Well Casing			
32						
34						
36						
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-114I
DATE COMPLETED: July 31, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER/K. DUWAL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42	- some limestone interbedding at 40.0ft BGS LIMESTONE, some sandstone interbedding, light gray/pink, wet	478.71	Bentonite Pellets Sand Pack 2" PVC Well Screen			
52	SHALE, limestone interbedding, pale green/gray, wet	468.71				
54	END OF BOREHOLE @ 53.0ft BGS	466.71				

WELL DETAILS
Screened interval:
471.71 to 466.71ft AMSL
48.00 to 53.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
474.71 to 466.71ft AMSL
45.00 to 53.00ft BGS
Material: #7 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-114S
DATE COMPLETED: July 25, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.76 516.31				
0	Overburden removed by air knife		Concrete			
2						
4			6" Borehole			
6			Bentonite Grout			
8	SANDSTONE, brown, wet, strong diesel odor	509.76				
10	- no diesel odor at 9.0ft BGS		2" PVC Well Casing			
12						
14						
16						
18						
20			Bentonite Pellets			
22						
24						
26						
28						
30			Sand Pack			
32						
34						
36			2" PVC Well Screen			
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-114S
DATE COMPLETED: July 25, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42	- some limestone interbedding at 40.0ft BGS	475.76					
	LIMESTONE, some sandstone interbedding, light gray/pink, wet	474.76					
	END OF BOREHOLE @ 42.0ft BGS		WELL DETAILS Screened interval: 485.76 to 475.76ft AMSL 31.00 to 41.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 487.76 to 474.76ft AMSL 29.00 to 42.00ft BGS Material: #7 Sand				
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-115I
DATE COMPLETED: July 27, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.88 516.63				
0	GRAVEL and SAND, coarse sand, fine-coarse gravel, loose		Concrete			
2						
		513.88				
4	SANDSTONE, loose, fine grained, brown, dry					
6						
	- gray at 7.0ft BGS					
8						
10			6" Borehole			
	- black shale layers, soft from 11.0 to 12.0ft BGS					
12						
14						
	- black shale layer, soft at 15.0ft BGS					
16						
18	- little moisture at 18.0ft BGS					
20			Bentonite Grout			
22						
	- wet at 23.0ft BGS					
24						
26						
28						
	- little shale zone at 29.7ft BGS					
30		486.88	2" PVC Well Casing			
	LIMESTONE, medium-coarse grained, chips, cohesive					
32						
	- little shale zone at 33.0ft BGS					
34						
36						
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-115I
DATE COMPLETED: July 27, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42	- a lot of water at 43.0ft BGS dolomite limestone, very fine grained, crystalline, pale white-cream from 43.0 to 48.0ft BGS		Time Release Bentonite Tablets 1/4" Sand Pack 2" PVC Well Screen			
44						
46						
48						
50						
52						
54						
56	- little shale layer 0.5' at 56.0ft BGS					
58						
60			Time Release Bentonite Tablets 1/4"			
62						
64	END OF BOREHOLE @ 63.0ft BGS	453.88	WELL DETAILS Screened interval: 470.88 to 460.88ft AMSL 46.00 to 56.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 472.88 to 453.88ft AMSL 44.00 to 63.00ft BGS Material: #5 Sand			
66						
68						
70						
72						
74						
76						
78						

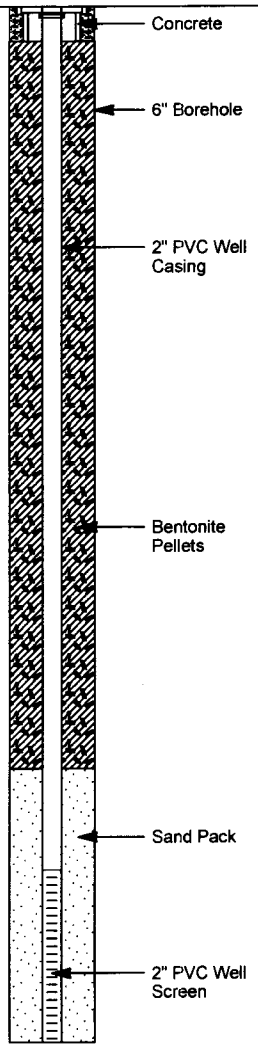
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-115S
DATE COMPLETED: July 28, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.89 516.58				
0	SAND and GRAVEL (Fill), coarse sand, fine-coarse gravel, well graded, loose					
		515.39				
2	SANDSTONE, fine grained, soft, powder					
22	- little moisture at 23.0ft BGS					
30	END OF BOREHOLE @ 30.0ft BGS	486.89				



WELL DETAILS
Screened interval:
491.89 to 486.89ft AMSL
25.00 to 30.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
494.89 to 486.89ft AMSL
22.00 to 30.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-116I
DATE COMPLETED: July 24, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE 517.30 TOP OF RISER 516.84					
0	SAND and GRAVEL (Fill)(overburden), coarse sand, fine-coarse gravel, loose		Concrete			
6	SANDSTONE, brown, fine grained, soft	512.05	6" Borehole			
10	- gray sand at 10.0ft BGS					
20			Bentonite Grout			
24	- wet at 24.5ft BGS					
26	LIMESTONE, fine grained, cohesive, trace pyrite	490.30				
30			2" PVC Well Casing			
32			1/4" Coated Bentonite Tablets			
34			Sand Pack			

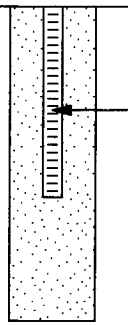
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-116I
DATE COMPLETED: July 24, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42							
44							
46							
48							
	- shale, soft, dark gray at 49.0ft BGS	468.30					
50	END OF BOREHOLE @ 49.0ft BGS						
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							



WELL DETAILS
Screened interval:
481.80 to 471.80ft AMSL
35.50 to 45.50ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
484.80 to 468.30ft AMSL
32.50 to 49.00ft BGS
Material: 20/40 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-116S
DATE COMPLETED: July 25, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	517.40 517.11				
0	SAND and GRAVEL (overburden) coarse sand, fine-coarse gravel		Concrete			
2						
4			6" Borehole			
6	SANDSTONE, gray, fine grained, loose	511.40	2" PVC Well Casing			
8						
10	- orange from 11.0 to 12.0ft BGS					
12	- gray at 13.0ft BGS					
14			Bentonite Pellets			
16						
18						
20						
22			Sand Pack			
24						
26			2" PVC Well Screen			
28	- limestone at 28.0ft BGS END OF BOREHOLE @ 28.0ft BGS	489.40				
30						
32						
34						
36						
38						

WELL DETAILS
Screened interval:
494.40 to 489.40ft AMSL
23.00 to 28.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
496.40 to 489.40ft AMSL
21.00 to 28.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-117I
DATE COMPLETED: July 25, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER GROUND SURFACE	518.22 517.75				
0	SAND and GRAVEL, coarse sand, fine-coarse gravel, cobbles, loose		Concrete			
4	SANDSTONE, loose, fine grained, gray	513.25				
6	- brown at 6.0ft BGS					
10			6" Borehole			
16			2" PVC Well Casing			
20			Bentonite Grout			
26			Bentonite Pellets			
28	- wet at 28.0ft BGS					
30		486.75				
32	LIMESTONE, chips, consolidated, soft-hard, medium grained					
34			Sand Pack			
38						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

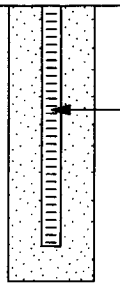
BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-117I
DATE COMPLETED: July 25, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42							
44							
46							
	SHALE, black	470.75					
48	END OF BOREHOLE @ 48.0ft BGS	469.75					
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							



WELL DETAILS
Screened interval:
480.75 to 470.75ft AMSL
37.00 to 47.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
485.75 to 469.75ft AMSL
32.00 to 48.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

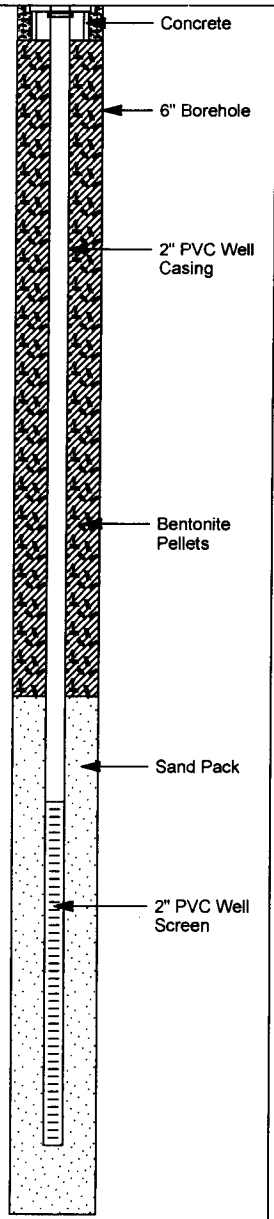
STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-118S
DATE COMPLETED: July 25, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	GROUND SURFACE	516.38
	TOP OF RISER	516.13
0	Overburden cleared by air knife	
2	SANDSTONE, orange/brown, dry	514.38
4		
6	- gray, moist at 6.0ft BGS	
8		
10		
12		
14		
16		
18		
20		
22		
24		
26	- wet at 27.0ft BGS	
28		
30		
32		
34	LIMESTONE, light gray, wet	483.38
36	END OF BOREHOLE @ 35.0ft BGS	481.38
38		

Monitoring Well



WELL DETAILS
Screened interval:
493.38 to 483.38ft AMSL
23.00 to 33.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10

RUN NUMBER	CORE RECOVERY %	RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-118S
DATE COMPLETED: July 25, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42			Material: PVC Sand Pack: 493.38 to 481.38ft AMSL 23.00 to 35.00ft BGS Material: #7 Sand				
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-119I
DATE COMPLETED: July 26, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	518.45 517.97				
0	SAND and GRAVEL (overburden)		Concrete			
6	SANDSTONE, fine grained, loose, light brown, soft	512.45	6" Borehole			
10	- gray from 10.5 to 13.5ft BGS					
13	- brown from 13.5 to 15.0ft BGS					
15	- gray at 15.0ft BGS		2" PVC Well Casing			
18	- wet at 18.0ft BGS					
20	LIMESTONE, chips, medium-coarse grained, gray	498.45	Bentonite Grout			
28	- water bearing zone from 28.0 to 33.0ft BGS		Bentonite Pellets			
33			Sand Pack			
38			2" PVC Well Screen			

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-119I
DATE COMPLETED: July 26, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42	SHALE	476.45	WELL DETAILS Screened interval: 486.45 to 476.45ft AMSL 32.00 to 42.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 488.45 to 475.45ft AMSL 30.00 to 43.00ft BGS Material: #5 Sand				
	END OF BOREHOLE @ 43.0ft BGS	475.45					
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-119S
DATE COMPLETED: July 26, 2006
DRILLING METHOD: 6" HAMMER
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	GROUND SURFACE TOP OF RISER	516.52 516.16				
0	SAND and GRAVEL, loose, well graded, brown		Concrete 6" Borehole			
6	SANDSTONE, sand, fine grained, loose, brown, wet due to other hole water pouring into soft dig hole	511.52	Bentonite Pellets 2" PVC Well Casing Sand Pack			
20	LIMESTONE, medium grained	496.52	2" PVC Well Screen			
21	END OF BOREHOLE @ 21.0ft BGS	495.52				

WELL DETAILS
Screened interval:
500.52 to 495.52ft AMSL
16.00 to 21.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
502.52 to 495.52ft AMSL
14.00 to 21.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-120I
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER GROUND SURFACE	513.89 511.59				
0	Overburden cleared by air knife		Concrete			
2	SANDSTONE, orange/brown, dry	509.59				
4	- gray, moist at 4.0ft BGS					
6						
8						
10			6" Borehole			
12						
14						
16						
18						
20			2" PVC Well Casing			
22						
24						
26						
28						
30			Bentonite Grout			
32						
34						
36						
38	LIMESTONE and SHALE, interbedded, gray/black, wet	473.59				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

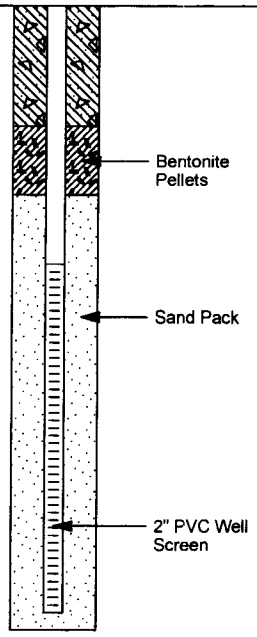
BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-120I
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
42						
44						
46						
48						
50						
52						
54						
56	SHALE, dark green/black, wet	456.59				
58	END OF BOREHOLE @ 58.0ft BGS	453.59				
60						
62						
64						
66						
68						
70						
72						
74						
76						
78						



WELL DETAILS
Screened interval:
464.09 to 454.09ft AMSL
47.50 to 57.50ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
466.09 to 453.59ft AMSL
45.50 to 58.00ft BGS
Material: #7 Sand

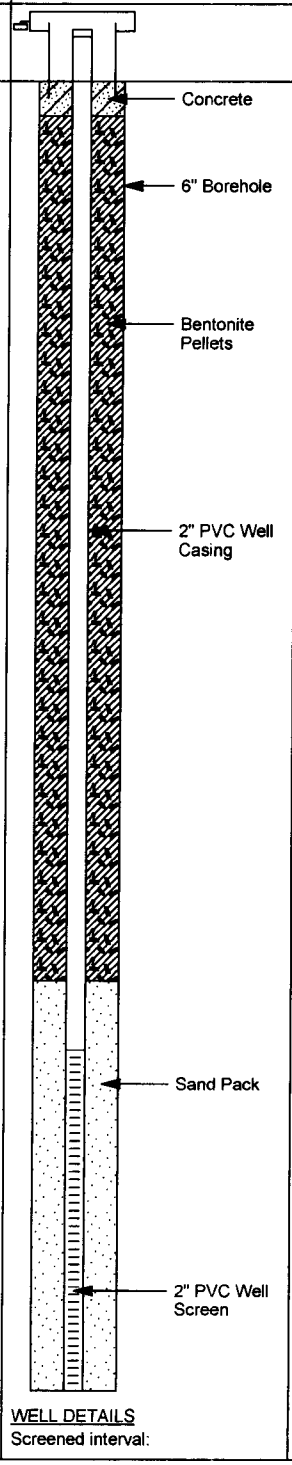
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-120S
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER GROUND SURFACE	513.93 511.85				
0	Overburden cleared by air knife					
2	SANDSTONE, orange/brown, dry	509.85				
4	- gray, moist at 4.0ft BGS					
38	END OF BOREHOLE @ 38.0ft BGS	473.85				



WELL DETAILS
Screened interval:

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-120S
DATE COMPLETED: July 21, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42			483.85 to 473.85ft AMSL 28.00 to 38.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 485.85 to 473.85ft AMSL 26.00 to 38.00ft BGS Material: #7 Sand				
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

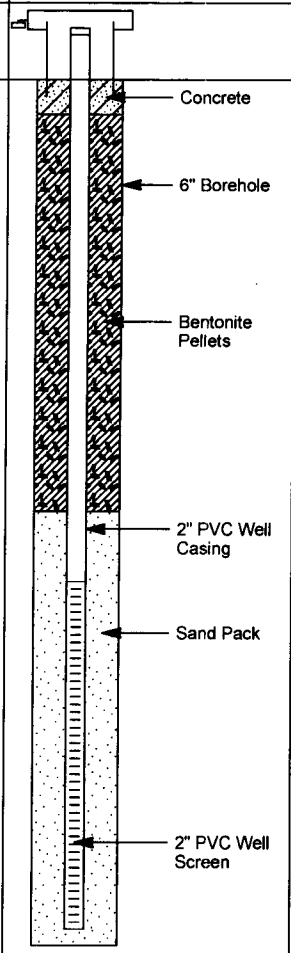
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-121S
DATE COMPLETED: July 19, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER GROUND SURFACE	518.63 515.93				
0	Overburden cleared by air knife					
6	SANDSTONE, trace mica flakes, gray, moist	509.93				
14	- water at 14.0ft BGS					
24	LIMESTONE, gray	492.93 491.93				
25	END OF BOREHOLE @ 25.0ft BGS					



WELL DETAILS
Screened interval:
501.43 to 491.43ft AMSL
14.50 to 24.50ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
503.43 to 490.93ft AMSL
12.50 to 25.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-122I
DATE COMPLETED: July 19, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %
	TOP OF RISER	528.18				
	GROUND SURFACE	525.53				
0	Overburden removed by air knife		Concrete			
2						
	SANDSTONE, orange/brown, dry	523.03				
4						
6						
8						
10		515.53	6" Borehole			
	LIMESTONE, gray/dark gray, very moist					
12						
14						
16			2" PVC Well Casing			
18						
20			Bentonite Grout			
22						
24						
26						
28						
30			Bentonite Pellets			
32			Sand Pack			
34						
		490.53				
36	Interbedded limestone (dark gray) and shale (green/gray)					
38			2" PVC Well Screen			

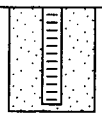
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-122I
DATE COMPLETED: July 19, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42	SHALE, soft, green/gray	484.53					
44	END OF BOREHOLE @ 43.0ft BGS	482.53	WELL DETAILS Screened interval: 492.73 to 482.73ft AMSL 32.80 to 42.80ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 494.73 to 482.53ft AMSL 30.80 to 43.00ft BGS Material: #7 Sand				
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

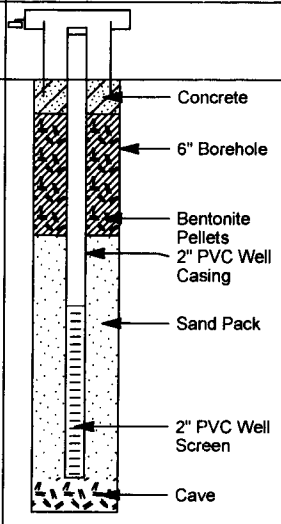
STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-122S
DATE COMPLETED: July 19, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	TOP OF RISER	528.43
	GROUND SURFACE	525.72
0	Overburden removed by air knife	
2		
4	SANDSTONE, orange/brown, dry	523.22
6		
8		
10	LIMESTONE, gray/dark gray, very moist	515.72
12	END OF BOREHOLE @ 12.5ft BGS	513.22
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		
36		
38		

Monitoring Well



WELL DETAILS
Screened interval:
519.22 to 514.22ft AMSL
6.50 to 11.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
521.22 to 514.22ft AMSL
4.50 to 11.50ft BGS
Material: #7 Sand

RUN NUMBER	CORE RECOVERY %	RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-123I
DATE COMPLETED: July 24, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	TOP OF RISER	516.75
	GROUND SURFACE	512.71
0	Overburden cleared by air knife	
4	SANDSTONE, orange/brown, dry	509.71
	- gray at 5.0ft BGS	
6	LIMESTONE, light gray, dry	506.71
14	- dark gray, possibly dolomitic, very hard at 15.0ft BGS	
36	- wet at 36.0ft BGS	
38	Transitional zone - pale green shale and light gray limestone, wet	474.71

Monitoring Well: Concrete; 6" Borehole; 2" PVC Well Casing; Bentonite Grout; Bentonite Pellets; Sand Pack; 2" PVC Well Screen

RUN NUMBER | CORE RECOVERY % | RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-123I
DATE COMPLETED: July 24, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: C. PINTER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	RUN NUMBER	CORE RECOVERY %	RQD %	
42							
44	END OF BOREHOLE @ 44.5ft BGS	468.21	WELL DETAILS Screened interval: 478.71 to 468.71ft AMSL 34.00 to 44.00ft BGS Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC Sand Pack: 480.71 to 468.21ft AMSL 32.00 to 44.50ft BGS Material: #5 Sand				
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							
70							
72							
74							
76							
78							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

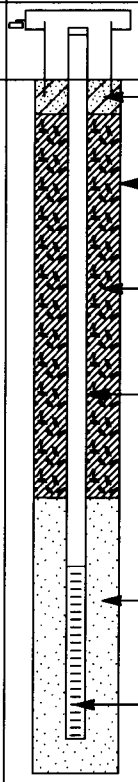
STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: DRESDEN GENERATING STATION
PROJECT NUMBER: 45136-23
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MORRIS, ILLINOIS

HOLE DESIGNATION: MW-DN-123S
DATE COMPLETED: July 24, 2006
DRILLING METHOD: AIR ROTARY
FIELD PERSONNEL: J. CLOSE

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	TOP OF RISER	515.03
	GROUND SURFACE	512.98
0	Overburden cleared by air knife	
4	SANDSTONE, orange/brown, dry	509.98
	- gray at 5.0ft BGS	
6	LIMESTONE, light gray, dry	506.98
14	- dark gray, possibly dolomitic, very hard at 15.0ft BGS	
20	END OF BOREHOLE @ 20.0ft BGS	492.98

Monitoring Well



WELL DETAILS
Screened interval:
498.98 to 493.98ft AMSL
14.00 to 19.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 10
Material: PVC
Sand Pack:
500.98 to 492.98ft AMSL
12.00 to 20.00ft BGS
Material: #5 Sand

RUN NUMBER	CORE RECOVERY %	RQD %

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 45136-23 - MW 104 109 112 TO 123.GPJ CRA_CORP.GDT 8/31/06

RETEC

Boring Log

Boring #: DSP-157S
Sheet 1 of 1

Project: Dresden Power Station	Drill Rig Type: Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 6421.84 Easting: 14728.71
Client: Exelon Nuclear	Bit Type: 4 1/4" ID Auger	Ground Elevation (ft. msl): 518.59
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 13.00
Start Date: 02/25/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 02/25/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).			
						CLAY: Sandy Lean Clay, soft, moist, yellowish brown (10YR 6/3) to redish yellow (7.5YR 6/8).			
						SANDSTONE: Sandstone, hard, moist to very moist, pale brown (10YR 6/3) from 3 to 6 feet, gray (10YR 6/1) from 6 foot to depth.	515		
					5				
							510		
					10				

Remarks and Datum Used:

The RETEC Group, Inc.
8605 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

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Boring Log

Boring #: DSP-157M
Sheet 1 of 1

Project: Dresden Power Station	Drill Rig Type:Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 6421.61 Easting: 14721.74
Client: Exelon Nuclear	Bit Type: 6" Tricone	Ground Elevation (ft. msl): 518.47
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 53.75
Start Date: 02/17/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 02/21/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).			
					5	CLAY: Sandy Lean Clay, soft, moist, yellowish brown (10YR 5/4).	515		
					10	SANDSTONE: Sandstone, hard, moist to wet, pale brown (10YR 6/3) to gray (10YR 6/1).	510		
					15		505		
					20		500		
					25	LIMESTONE: Limestone, very hard, wet, white to light gray (5Y 7/1) to pinkish white (7.5YR 8/2), occasional pyrite, clay and sand stringers.	495		
					30		490		
					35		485		
					40		480		
					45	LIMESTONE: Transitional zone, Limestone and Shale interbedding, Limestone (same as above) majority of zone, Shale (weathered small servaral inch thick lenses), hard, wet, pale green (Gley 1 6/2).	475		
					50	SHALE: Shale, hard, moist to wet, very dard greenish gray (Gley 1 3/1).	470		
							465		

Remarks and Datum Used:

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Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-157D
Sheet 1 of 3

Project: Dresden Power Station	Drill Rig Type: Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 6420.97 Easting: 14714.44
Client: Exelon Nuclear	Bit Type: 8" Tricone	Ground Elevation (ft. msl): 518.46
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 130.50
Start Date: 02/16/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 02/25/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).			
						CLAY: Sandy Lean Clay, soft, moist, yellowish brown (10YR 5/4).			
					5	SANDSTONE: Sandstone, hard, moist to wet, pale brown (10YR 6/3) to gray (10YR 6/1), black mica stringers.	515		
					10		510		
					15		505		
					20		500		
					25	LIMESTONE: Limestone, hard, wet, white to light gray (5Y 7/1), pyrite, clay stringers.	495		
					30		490		
					35		485		
							480		

Remarks and Datum Used:

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Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-157D
Sheet 2 of 3

Sample: Type & Number	Sample: Background PID (ppm)	Sample: PID (ppm)	Sample: Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					40				
						LIMESTONE: Transitional zone, Limestone, Sandstone and Shale interbedding, Limestone (same as above) majority of zone, Shale (weathered small several inch thick lenses), hard, wet, pale green (Gley 1 6/2), at 41.5 to 42 feet Sandstone lense.			
					45		475		
						SHALE: Shale (weathered), hard, wet, pale green (Gley 1 6/2).			
					50	SHALE: Shale, hard, wet, very dark greenish gray (Gley 1 3/1).	470		
					55		465		
					60		460		
					65		455		
					70		450		
					75		445		
					80		440		
					85		435		

Remarks and Datum Used:

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Sample Type
SS = Soil Sample

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Boring Log

Boring #: DSP-157D
Sheet 3 of 3

Sample: Type & Number	Sample: Background PID (ppm)	Sample: PID (ppm)	Sample: Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					90		430		
					95		425		
					100		420		
					105		415		
					110		410		
					115		405		
					120	DOLOMITE: Dolomite, very hard, moist to wet, light brownish gray (2.5Y 6/2), crystalline, pyrite stringers.	400		
					125		395		
					130		390		

Remarks and Datum Used:

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Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-158S
Sheet 1 of 1

Project: Dresden Power Station	Drill Rig Type: Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 5438.73 Easting: 15942.48
Client: Exelon Nuclear	Bit Type: 4 1/4" ID Auger	Ground Elevation (ft. msl): 507.73
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 13.50
Start Date: 02/28/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 03/04/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).			
						CLAY: Sandy Lean Clay, soft, moist, light yellowish brown (2.5Y 6/4).	505		
					5	CLAY: Lean Clay with sand, hard, moist, pale yellow (5Y 7/3).			
					10	LIMSTONE: Limestone, very hard, moist, white (5Y 8/1) to gray (5Y5/1), crystaline.	500		
							495		

Remarks and Datum Used:

Sample Type
SS = Soil Sample

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RETEC

Boring Log

Boring #: DSP-158M
Sheet 1 of 1

Project: Dresden Power Station	Drill Rig Type: Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 5442.41 Easting: 15939.08
Client: Exelon Nuclear	Bit Type: 6" Air Hammer	Ground Elevation (ft. msl): 507.97
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 57.50
Start Date: 03/02/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 03/02/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sample Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).	505		
					5	CLAY: Sandy Lean Clay, soft, moist, yellowish brown (2.5Y 6/4).			
					10	CLAY: Lean Clay, stiff, moist, redish yellow (5YR 6/8) to gray (Gley 1 6/N) to dark gray (Gley 1 4/N), laminated.	500		
					15	LIMESTONE: Limestone, very hard, dry to very moist, crystaline, light gray (Gley 1 7/N) to gray (Gley 1 6/N) 11 to 22 feet bgs, light greenish gray (Gley 1 8/1) to white (Gley 1 8/N) below 22, small very dark gray (Gley 1 3/N) shale stingers from 11 to 22 feet bgs,	495		
					20		490		
					25		485		
					30		480		
					35		475		
					40		470		
					45		465		
					50	LIMESTONE: Transitional zone, Limestone and Shale interbedding, Limestone (same as above) majority of zone, Shale (weathered small several inch thick lenses), hard, wet, pale green (Gley 1 6/2).	460		
					55	SHALE: Shale, hard, moist to wet, very dark greenish gray (Gley 1 3/1).	455		

Remarks and Datum Used:

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Chicago, IL 60631
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Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-158D
Sheet 1 of 3

Project: Dresden Power Station	Drill Rig Type: Gus Pech GP-750C	Location: Dresden, Illinois
Project #: EXENW-18513-320	Method:	Northing: 5448.08 Easting: 15934.92
Client: Exelon Nuclear	Bit Type: 8" & 6" Air Hammer	Ground Elevation (ft. msl): 507.79
Contractor: TSC	Boring Diameter:	Total Depth (ft. bgs): 135.00
Start Date: 02/25/2005	Backfill: Bentonite Chips	Logged By: Torrey Morris
Finish Date: 03/03/2005	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	TOPSOIL: Topsoil, soft, moist, black to dark brown (Gley 1 2.5/1).			
					5	CLAY: Sandy Lean Clay, moist, soft, light yellowish brown (2.5Y 6/4).	505		
					10	CLAY: Lean Clay, hard, moist, dark gray (Gley 1 4/N), some Limestone pieces mixed in clay.	500		
					15	LIMESTONE: Limestone, very hard, dry to wet, light gray (Gley 1 7/N) to gray (Gley 1 6/N), crystaline, fossils can be seen in larger cuttings.	495		
					20		490		
					25		485		
					30		480		
					35		475		
					40		470		

Remarks and Datum Used:

The RETEC Group, Inc.
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Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-158D
Sheet 2 of 3

Sample				Graphic	Depth (ft. bgs)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft. msl)	Drilling Progress	Comments
Type & Number	Back-ground PID (ppm)	PID (ppm)	Sampled Interval						
					45		465		
					50		460		
					55	LIMESTONE: Transitional zone, Limestone and Shale interbedding, Limestone (same as above with color change to light greenish gray (Gley 1 8/1)), Shale (weatherd small several inch thick lenses), hard, wet, pale green (Gley 1 6/2).	455		
					60	SHALE: Shale, hard, wet, very dark greenish gray (Gley 1 3/1).	450		
					65		445		
					70		440		
					75		435		
					80		430		
					85		425		
					90		420		
							415		

Remarks and Datum Used:

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Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-158D
Sheet 3 of 3

Sample: Type & Number	Sample: Background PID (ppm)	Sample: PID (ppm)	Sample: Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					95		410		
					100		405		
					105		400		
					110		395		
					115		390		
					120		385		
					125	DOLOMITE: Dolomite, very hard, moist to wet, light brownish gray (2.5Y 6/2), crystaline	380		
					130		375		
					135				

Remarks and Datum Used:

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Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-159S
Sheet 1 of 1

Project: **Dresden Power Station**	Drill Rig Type: **Gus Pech GP-750C**	Location: **Dresden, Illinois**
Project #: **EXENW-18513-320**	Method:	Northing: **3962.1** Easting: **14862.98**
Client: **Exelon Nuclear**	Bit Type: **3 1/4" ID Auger**	Ground Elevation (ft. msl): **516.27**
Contractor: **TSC**	Boring Diameter:	Total Depth (ft. bgs): **16.00**
Start Date: **03/04/2005**	Backfill: **Bentonite Chips**	Logged By: **Torrey Morris**
Finish Date: **03/07/2005**	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	FILL: Fill	515		
					5		510		
					10	CLAY: Sandy Lean Clay, soft, very moist, yellowish brown (10YR 5/4).	505		
					15	LIMESTONE: Limestone, hard, wet, white (5Y 8/1) to gray (5Y 5/1), crystaline.			

Remarks and Datum Used:

The RETEC Group, Inc.
8605 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-159M
Sheet 1 of 1

Project: **Dresden Power Station**	Drill Rig Type: **Gus Pech GP-750C**	Location: **Dresden, Illinois**
Project #: **EXENW-18513-320**	Method:	Northing: **3969.14** Easting: **14863.65**
Client: **Exelon Nuclear**	Bit Type: **6" Air Hammer**	Ground Elevation (ft. msl): **516.23**
Contractor: **TSC**	Boring Diameter:	Total Depth (ft. bgs): **59.30**
Start Date: **03/11/2005**	Backfill: **Bentonite Chips**	Logged By: **Torrey Morris/Randy Mackay**
Finish Date: **03/14/2005**	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	FILL: Fill	515		
					5				
					10	CLAY: Sandy Lean Clay, soft, very moist, yellowish brown (10YR 5/4).	510		
					15	LIMESTONE: Limestone, light blueish gray (Gley 2 7/1), with white (Gley 1 8/1) speckles, texture is microcrystaline to fine grained, conformable, dry, small Shale lenses thoughout dark blueish gray (Gley 2 4/1) to pale green (Gley 1 6/2), fractured, pyrite stringers	505		
					20		500		
					25		495		
					30		490		
					35		485		
					40		480		
					45		475		
					50		470		
					55	SHALE: Shale, hard moist to very moist, gray (Gley 1 10Y 5/1) to very dark greenish gray (Gley 1 3/1) when wet, slightly fractured to fractured, conformable, strong, microcrystaline, uniform, fresh, competent, shear, undulating to planar, clean, pyrite nodules.	460		

Remarks and Datum Used:

The RETEC Group, Inc.
8805 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-159D
Sheet 1 of 3

Project: **Dresden Power Station**	Drill Rig Type: **Gus Pech GP-750C**	Location: **Dresden, Illinois**
Project #: **EXENW-18513-320**	Method:	Northing: **3978.34** Easting: **14863.78**
Client: **Exelon Nuclear**	Bit Type: **8" & 6" Air Hammer**	Ground Elevation (ft. msl): **516.32**
Contractor: **TSC**	Boring Diameter:	Total Depth (ft. bgs): **137.00**
Start Date: **03/07/2005**	Backfill: **Bentonite Chips**	Logged By: **Torrey Morris/Randy Mackay**
Finish Date: **03/14/2005**	Completion:	Checked by:
Sample Method:		Depth to Groundwater:

Sample Type & Number	Sample Background PID (ppm)	Sample PID (ppm)	Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					0	FILL: Fill	515		
					5				
					10	CLAY: Sandy Lean Clay, soft, very moist, yellowish brown (10YR 5/4).	510		
					15	LIMESTONE: Limestone, light blueish gray (Gley 2 7/1), with white (Gley 1 8/1) speckles, texture is microcrystaline to fine grained, conformable, dry, small Shale lenses thoughout dark blueish gray (Gley 2 4/1) to pale green (Gley 1 6/2), fractured, pyrite stringers	505		
					20		500		
					25		495		
					30		490		
					35		485		
					40		480		
							475		

Remarks and Datum Used:

The RETEC Group, Inc.
8605 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-8900
Fax: (773) 714-8805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-159D
Sheet 2 of 3

Sample: Type & Number	Sample: Background PID (ppm)	Sample: PID (ppm)	Sample: Sampled Interval	Graphic	Depth (ft. bgs)	Soil and Rock Description (Classification Scheme: USCS/ASTM)	Elevation (ft. msl)	Drilling Progress	Comments
					45		470		
					50		465		
					55		460		
					60	SHALE: Shale, hard moist to very moist, gray (Gley 1 10Y 5/1) to very dark greenish gray (Gley 1 3/1) when wet, slightly fractured to fractured, conformable, strong, microcrystaline, uniform, fresh, competent, shear, undulating to planar, clean, pyrite nodules.	455		
					65		450		
					70		445		
					75		440		
					80		435		
					85		430		
					90		425		

Remarks and Datum Used:

The RETEC Group, Inc.
8605 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Boring Log

Boring #: DSP-159D
Sheet 3 of 3

Sample				Graphic	Depth (ft. bgs)	Soil and Rock Description Classification Scheme: USCS/ASTM	Elevation (ft. msl)	Drilling Progress	Comments
Type & Number	Back-ground PID (ppm)	PID (ppm)	Sampled Interval						
					95		420		
					100		415		
					105		410		
					110		405		
					115		400		
					120		395		
					125	DOLOMITE: Dolomite, very stong, very light gray and light gray (mottled), microcrystalline, vuggy, some subhorizontal fractures, (~ 1 foot intervals), vertical fracturing from 132-135.5 feet and 137-138 feet.	390		
					130		385		
					135		380		

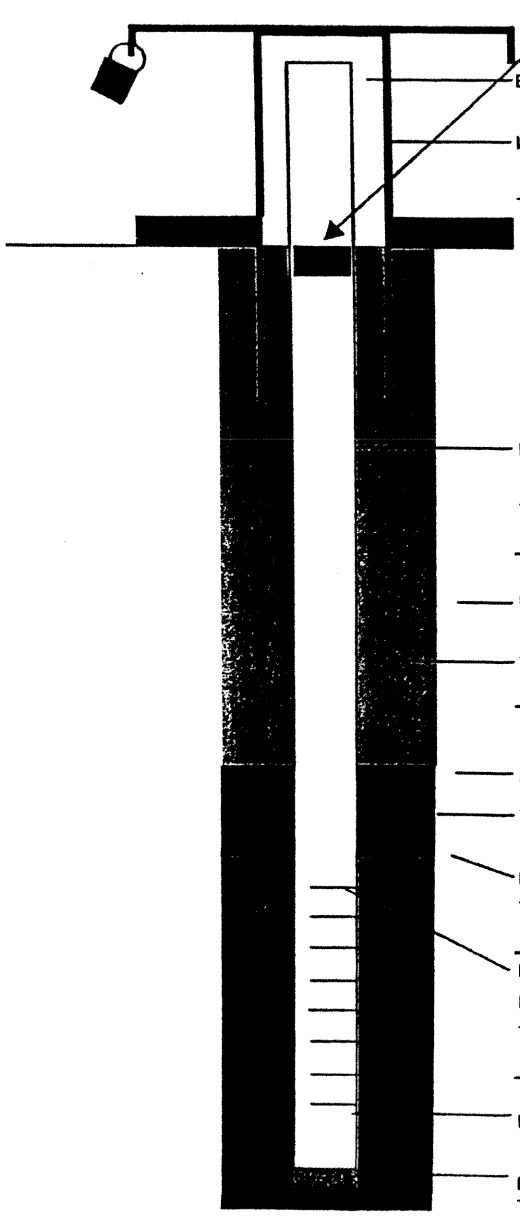
Remarks and Datum Used:

The RETEC Group, Inc.
8605 W. Bryn Mawr Ave, Ste. 301
Chicago, IL 60631
Phone: (773) 714-9900
Fax: (773) 714-9805

Sample Type
SS = Soil Sample

RETEC

Project Name	HydroGeologic Assesment	Monitoring Well No.	DSP-157S
Project Number	EXENW-18512-312		
Date of Installation	February 25, 2005		
Drilling Company	Testing Service Corporation (TSC)		
Field Engineer	Torrey Morris		



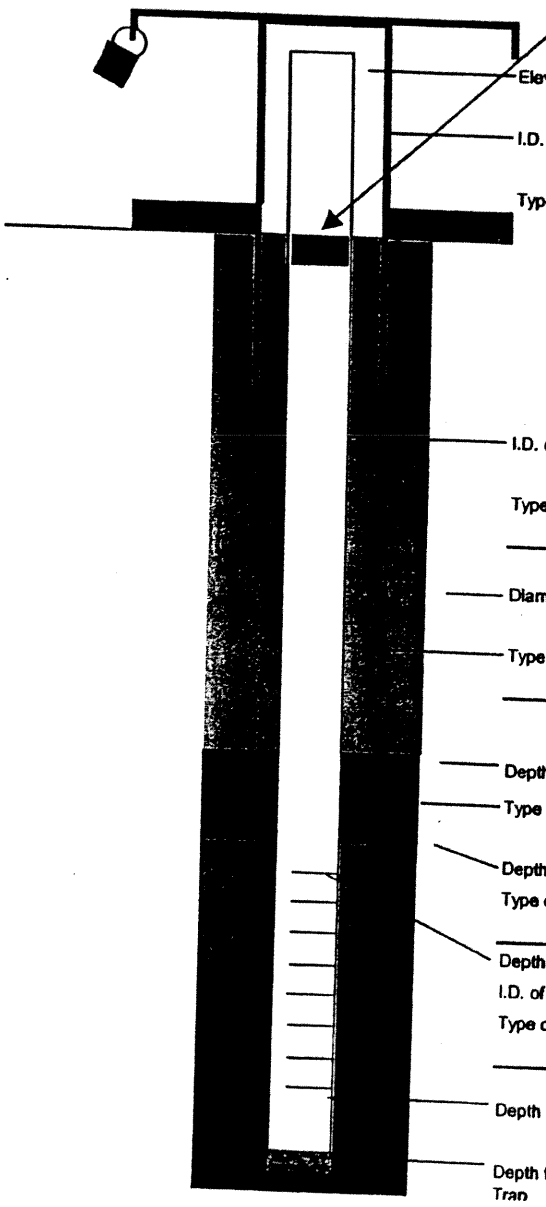
Flush Mount	
Elevation of Top of Riser Pipe	521.54 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	3/8 inch Bentonite Chips
Depth to Top of Seal	Surface
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	1 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	2 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	12 ft bgs
Depth to Bottom of Sediment Tran	12.5 ft bgs
Depth to Bottom of Borehole	13 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment
Project Number	EXENW-18512-312
Date of Installation	February 21, 2005
Drilling Company	Testing Service Corporation (TSC)
Field Engineer	Torrey Morris

Monitoring Well No. DSP-157M



Flush Mount	
Elevation of Top of Riser Pipe	521.80 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	Bentonite Grout
Depth to Top of Seal	33 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	35.5 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	38 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	48 ft bgs
Depth to Bottom of Sediment Trap	48.5 ft bgs
Depth to Bottom of Borehole	53.75 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment	Monitoring Well No.	DSP-157D
Project Number	EXENW-18512-312		
Date of Installation	February 25, 2005		
Drilling Company	Testing Service Corporation (TSC)		
Field Engineer	Torrey Morris		

Flush Mount	
Elevation of Top of Riser Pipe	521.86 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	8 inch (0-50 ft)/6 inch (50-130 ft)
Type of Backfill	Bentonite Grout
Depth to Top of Seal	114.2 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	118 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	120 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	130 ft bgs
Depth to Bottom of Sediment Trap	130.5 ft bgs
Depth to Bottom of Borehole	130.5 ft bgs

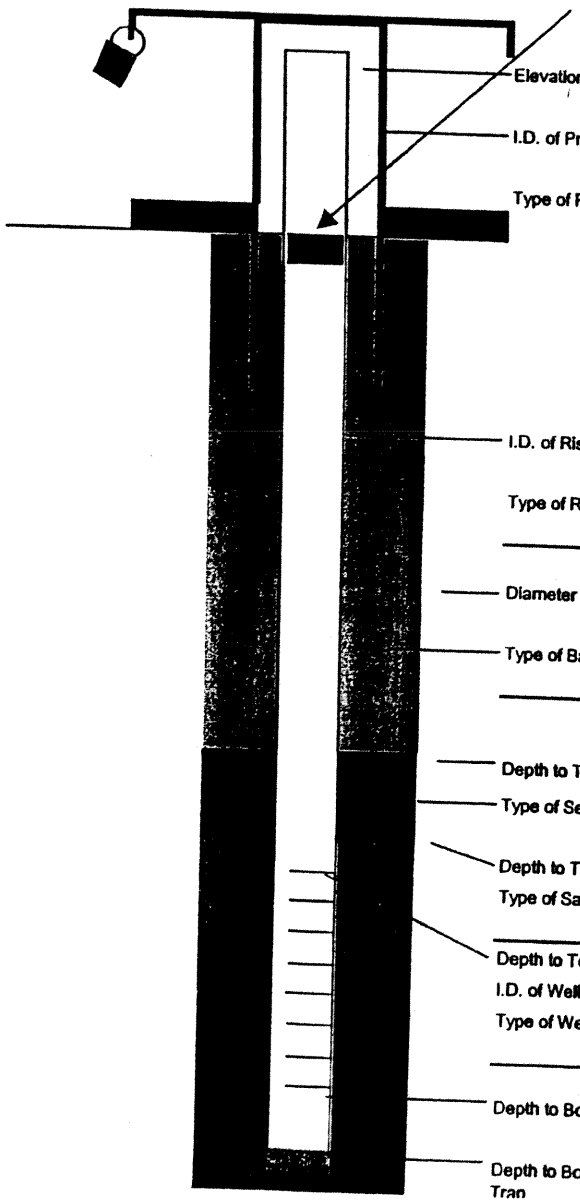
NOT TO SCALE

Remarks: To confine the lower aquifer from the upper aquifer during drilling, a 6 inch ID steel casing was placed down hole from 0 to 50 feet bgs (top of shale layer), then the outside was sealed with bentonite grout.

RETEC

Project Name	HydroGeologic Assesment
Project Number	EXENW-18512-312
Date of Installation	March 4, 2005
Drilling Company	Testing Service Corporation (TSC)
Field Engineer	Torrey Morris

Monitoring Well No. DSP-158S



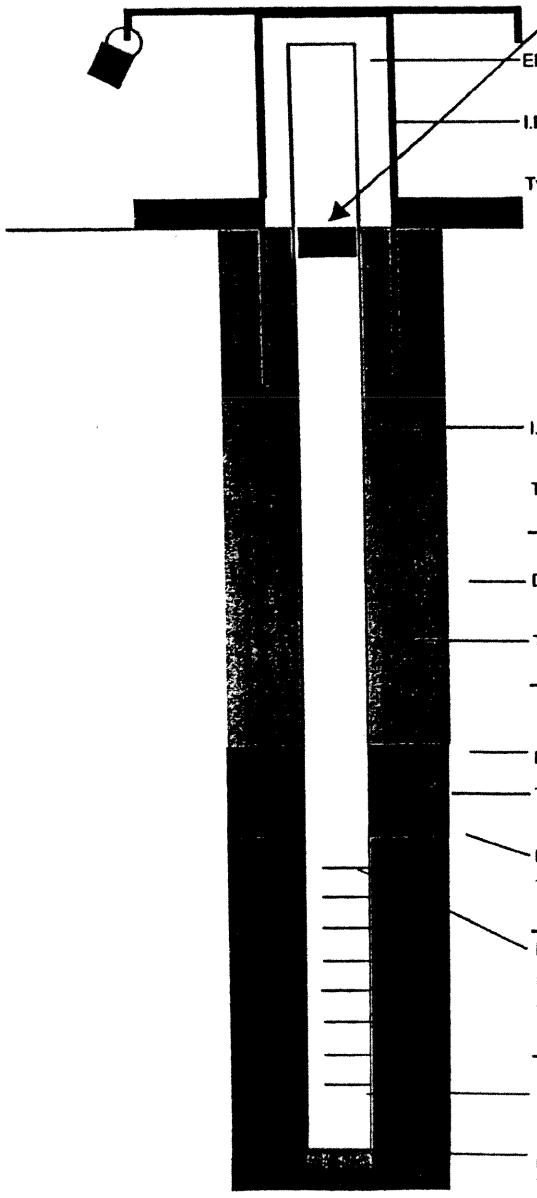
Flush Mount	
Elevation of Top of Riser Pipe	510.78 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	3/8 inch Bentonite Chips
Depth to Top of Seal	Surface
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	1 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	2 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	12 ft bgs
Depth to Bottom of Sediment Trap	12.5 ft bgs
Depth to Bottom of Borehole	13.5 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment
Project Number	EXENW-18512-312
Date of Installation	March 2, 2005
Drilling Company	Testing Service Corporation (TSC)
Field Engineer	Torrey Morris

Monitoring Well No. DSP-158M



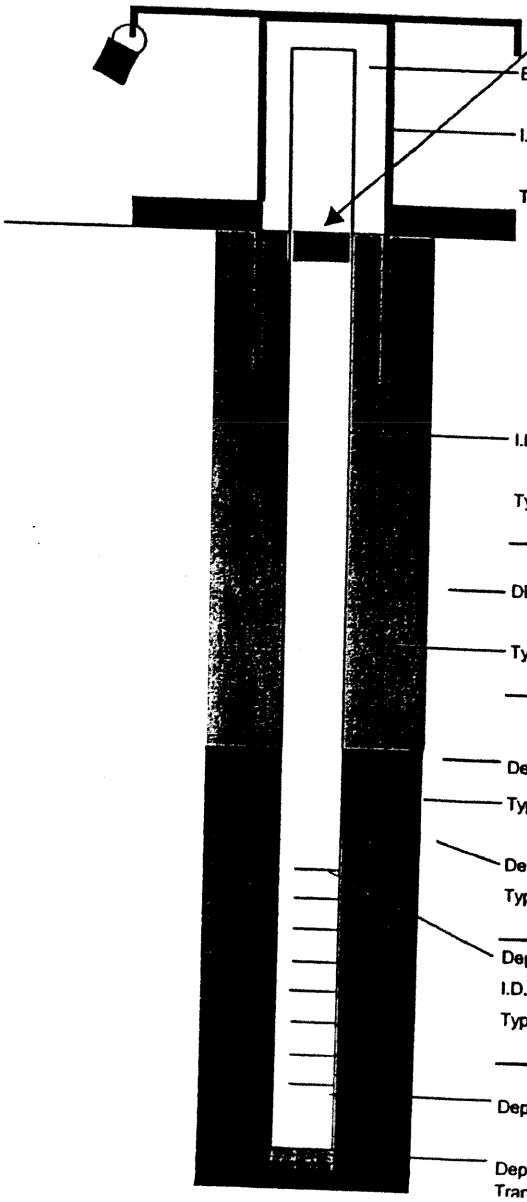
Flush Mount	
Elevation of Top of Riser Pipe	510.64 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	Bentonite Grout and Portland Cement mix
Depth to Top of Seal	41 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	43.5 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	46 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	56 ft bgs
Depth to Bottom of Sediment Trap	56.5 ft bgs
Depth to Bottom of Borehole	57.5 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment
Project Number	EXENW-18512-312
Date of Installation	March 3, 2005
Drilling Company	Testing Service Corporation (TSC)
Field Engineer	Torrey Morris

Monitoring Well No. DSP-158D



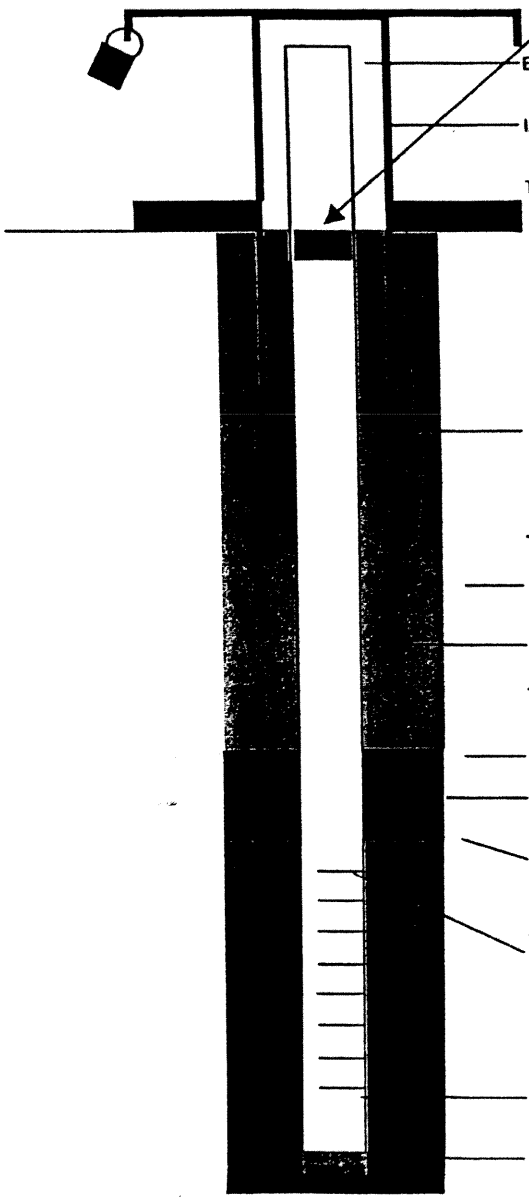
Flush Mount	
Elevation of Top of Riser Pipe	510.39 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	8 inch (0-57 ft)/6 inch (57-135 ft)
Type of Backfill	Bentonite Grout and Portland Cement Mix
Depth to Top of Seal	121 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	123 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	125 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	134.5 ft bgs
Depth to Bottom of Sediment Trap	135 ft bgs
Depth to Bottom of Borehole	135 ft bgs

NOT TO SCALE

Remarks: To confine the lower aquifer from the upper aquifer during drilling, a 6 inch ID steel casing was placed down hole from 0 to 57 feet bgs (top of shale layer), then the outside was sealed with bentonite quickgel and portland cement mix..

RETEC

Project Name	HydroGeologic Assesment	Monitoring Well No.	DSP-159S
Project Number	EXENW-18512-312		
Date of Installation	March 7, 2005		
Drilling Company	Testing Service Corporation (TSC)		
Field Engineer	Torrey Morris		



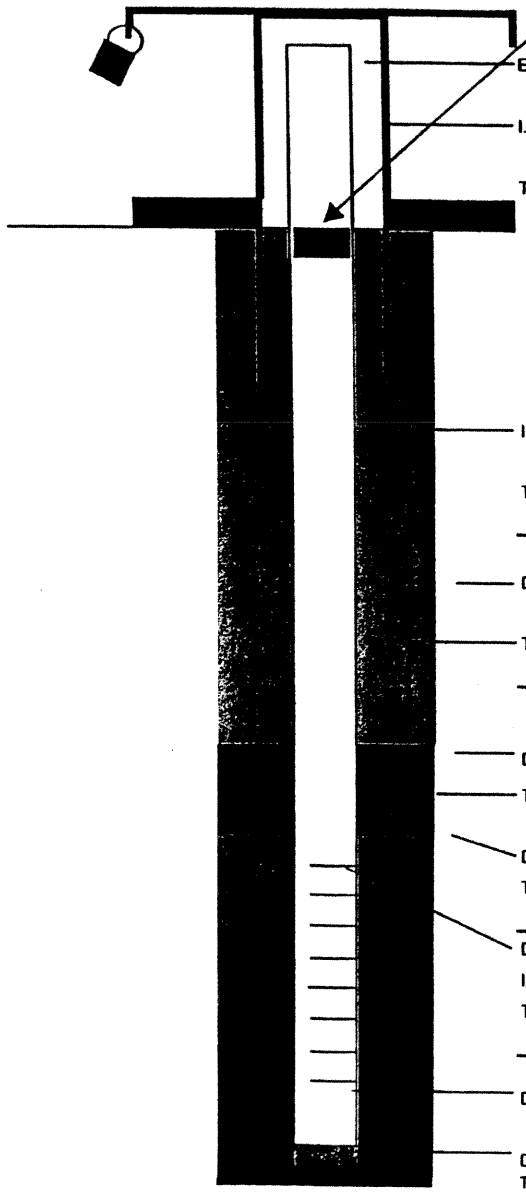
Flush Mount	
Elevation of Top of Riser Pipe	519.41 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	3/8 inch Bentonite Chips
Depth to Top of Seal	Surface
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	3 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	5 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	15 ft bgs
Depth to Bottom of Sediment Trap	15.5 ft bgs
Depth to Bottom of Borehole	16 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment
Project Number	EXENW-18512-312
Date of Installation	March 11, 2005
Drilling Company	Testing Service Corporation (TSC)
Field Engineer	Torrey Morris

Monitoring Well No. DSP-159M

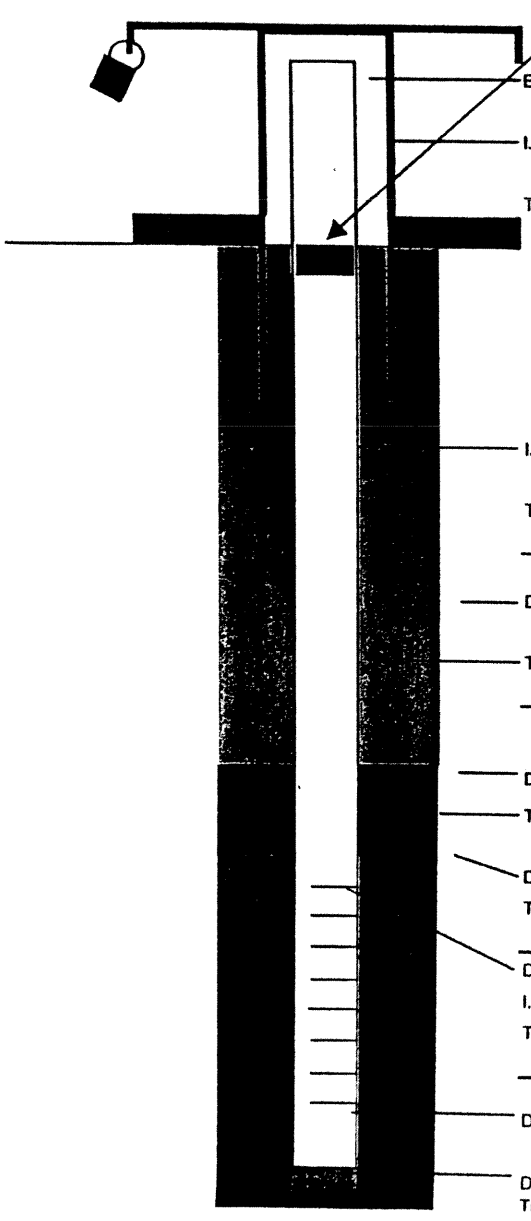


Flush Mount	
Elevation of Top of Riser Pipe	519.37 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	6 inch
Type of Backfill	Bentonite Grout
Depth to Top of Seal	43.75 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	46 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	48 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	58 ft bgs
Depth to Bottom of Sediment Trap	58.5 ft bgs
Depth to Bottom of Borehole	59.3 ft bgs

NOT TO SCALE

RETEC

Project Name	HydroGeologic Assesment	Monitoring Well No.	DSP-159D
Project Number	EXENW-18512-312		
Date of Installation	March 14, 2005		
Drilling Company	Testing Service Corporation (TSC)		
Field Engineer	Torrey Morris		



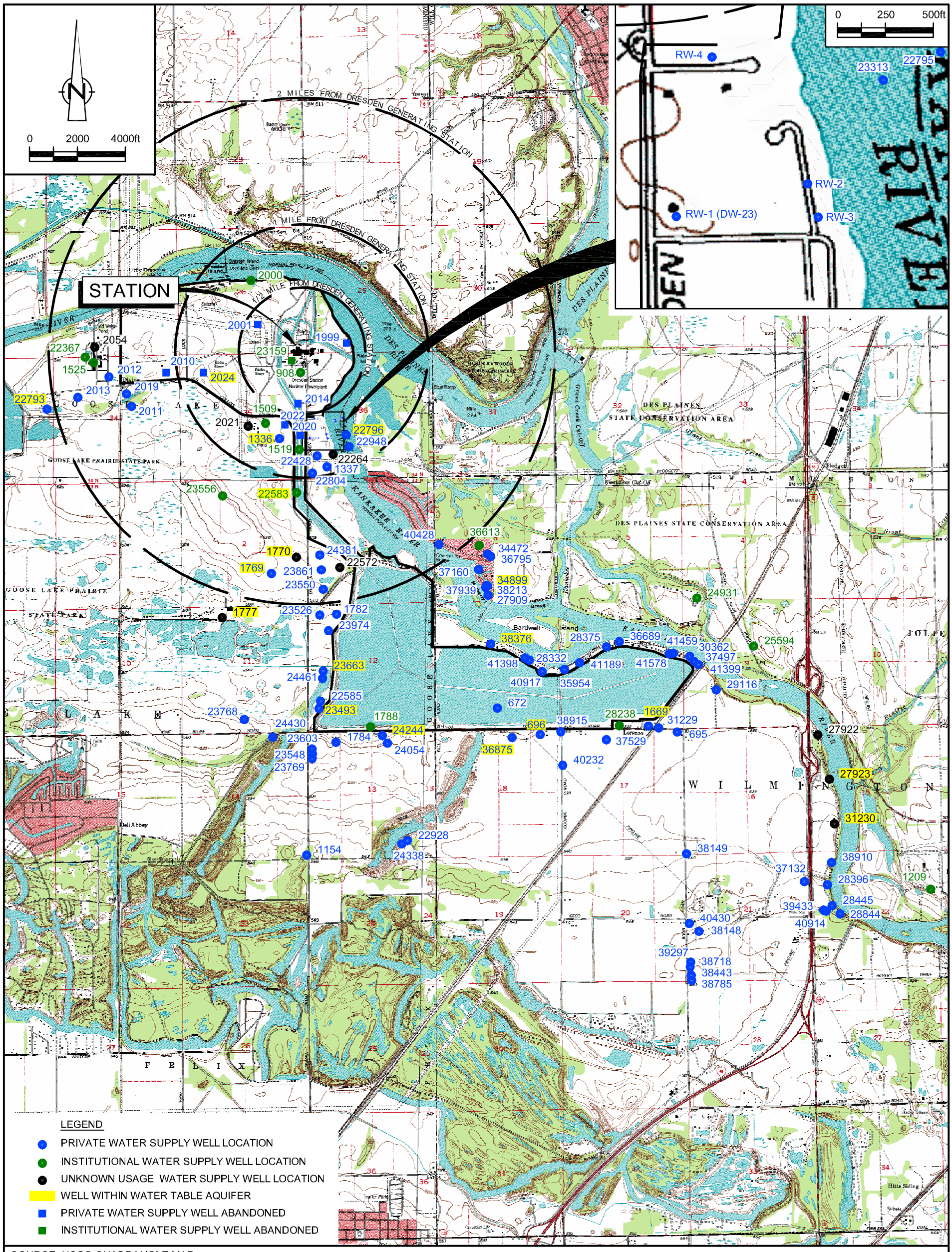
Flush Mount	
Elevation of Top of Riser Pipe	519.27 ft msl
I.D. of Protective Casing	4 inch
Type of Protective Casing	Steel Casing
I.D. of Riser Pipe	2 inch
Type of Riser Pipe	2 inch Schedule 40 Flush Threaded Casing (PVC)
Diameter of Borehole	8 inch (0-60 ft)/6 inch (60-137 ft)
Type of Backfill	Bentonite Grout and Portland Cement Mix
Depth to Top of Seal	122 ft bgs
Type of Seal	3/8 inch Bentonite Chips
Depth to Top of Sandpack	124 feet bgs
Type of Sandpack	10x20 Colorado Silica Sand
Depth to Top of Screen	126 ft bgs
I.D. of Well Screen	2 inch
Type of Well Screen	2 inch Schedule 40 Screen 0.010 Slot Flush Thread (PVC)
Depth to Bottom of Screen	136 ft bgs
Depth to Bottom of Sediment Trap	136.5 ft bgs
Depth to Bottom of Borehole	137 ft bgs

NOT TO SCALE

Remarks: To confine the lower aquifer from the upper aquifer during drilling, a 6 inch ID steel casing was placed down hole from 0 to 60 feet bgs (top of shale layer), then the outside was sealed with a bentonite grout and portland cement mix..

APPENDIX B

WATER SUPPLY WELL INVENTORY



SOURCE: USGS QUADRANGLE MAP;
DRESDEN MOSAIC, ILLINOIS

NOTES:
- REFER TO APPENDIX B - TABLE B.1 FOR PRIVATE/PUBLIC WATER SUPPLY WELL INFORMATION
- WELL LOCATIONS ARE BASED UPON INFORMATION PROVIDED IN ISGS SURVEY AND ARE APPROXIMATE
- WELL LOCATION NUMBER ON FIGURE CORRESPONDS TO COUNTY WELL ID NUMBER IN TABLE B.1

Exelon

GRA

figure B.1

PRIVATE/PUBLIC WATER SUPPLY WELL LOCATIONS
DRESDEN GENERATING STATION
EXELON GENERATION COMPANY, LLC
Morris, Illinois

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Grundy 908	Dresden Nuclear Power Station	On-Site	-	-	1499		2	
Grundy 1154	Walter Brown	N/A	5100	South	275		1	
Grundy 1336	B.C. Nickolson	N/A	1000	South	90		2	
Grundy 1337	Lewis Lyons	N/A	1000	East	203		2	
Grundy 1509	G E Similator	N/A	300	South	383		2	
Grundy 1519	General Electric Co	N/A	1100	West	788		2	
Grundy 1525	Reichhold Chem Inc	N/A	900	South	706		2	
Grundy 1769	Wm Osbourne	N/A	2800	West	94		2	
Grundy 1770	Wm Osbourne	N/A	1000	West	113		2	
Grundy 1777	Il Clay Products	N/A	5000	West	105		2	
Grundy 1782	Martin Underwood	N/A	400	West	157		2	
Grundy 1784	George Trotter	N/A	500	South	190		1	
Grundy 1788	Goose Lake Sch.	On-Site	-	-	95		1	Inundated by Dresden cooling lake
Grundy 1999	A J Craymer	On-Site	-	-	197		2	
Grundy 2000	State of Illinois	On-Site	-	-	203		2	
Grundy 2001	W L Wainwright	On-Site	-	-	190		2	
Grundy 2010	F Collins	On-Site	-	-	188		2	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Grundy 2011	Frank Collins	N/A	1000	South	240		2	
Grundy 2012	O E Collins	N/A	1000	West	237		2	
Grundy 2013	O E Collins	N/A	2000	West	164		2	
Grundy 2014	S Melbourne	On-Site	-	-	204		2	
Grundy 2019	Collins	N/A	500	South	200		2	
Grundy 2020	C Osbourne	N/A	300	South	200		2	
Grundy 2021	C Osbourne	N/A	500	South	146		2	
Grundy 2022	S & W Osbourne	N/A	300	South	267		2	
Grundy 2024	W L Wainwright	On-Site	-	-	114		2	
Grundy 22367	Reichhold Inc	N/A	1500	West	710		2	
Grundy 22428	Manny Tulumaris	On-Site	-	-	200		2	
Grundy 22583	Tri-County Well & Pump	On-Site	-	-	38		2	
Grundy 22585	John Horvat	Lorenzo Rd., Wilmington, IL	300	West	265		1	
Grundy 22793	Eugene Chamberlain	On-Site	2800	West	50		2	
Grundy 22795	Gery Brieser	N/A	1500	East	145			
Grundy 22796	Gery Brieser	N/A	1500	East	100			
Grundy 22804	Veronica Schmitz	N/A	300	East	245		2	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Grundy 22928	Don Bedford	County Line Rd., Coal City, IL	4500	South	125		1	
Grundy 22948	Doug Randolph	N/A	1800	East	165		2	
Grundy 23159	National Concrete Unit	On-Site	-	-	300		2	
Grundy 23313	Rich Massey	N/A	1200	East	290		2	
Grundy 23493	Schmitt, Frank & Claudette	N/A	100	West	82		2	
Grundy 23526	James McCormick	5150 N. Dresden Rd., Morris, IL	700	West	385		1	
Grundy 23548	Bill Scwantes	3830 N. Dresden Rd., Coal City, IL	1000	South	220		1	
Grundy 23550	Ronald Bettenhauser	N/A	1200	West	290		2	
Grundy 23556	Dresden Nuclear Power Plant	N/A	900	West	460		2	
Grundy 23603	Kenneth Shetina	3870 N. Dresden Rd., Coal City, IL	700	South	167		1	
Grundy 23663	Larry Price	4530 N. Dresden Rd., Morris, IL	500	West	77		1	
Grundy 23768	Dave Grohne	Pine Bluff Rd., Morris IL	3000	West	700		1	
Grundy 23769	Jeffery Berry	3780 N. Dresden Rd., Coal City, IL	1100	South	287		1	
Grundy 23861	Ray Kemmerling	N/A	1400	West	300		2	
Grundy 23974	Tim English	4800 N. Dresden Rd., Morris IL	200	West	280		1	
Grundy 24054	Kevin Greco	3920 Coneflower Dr., Coal City, IL	500	South	400		1	
Grundy 24244	Glen Jackson	3925 Clover Lane, Coal City, IL	200	South	78		1	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Grundy 24338	Carl Miller	8925 Clover Lane, Coal City, IL	4700	South	600		1	
Grundy 24381	Larry & Tammy Marino	N/A	500	South	205		2	
Grundy 24430	Greg Hill	7755 E. Pine Bluff Rd., Morris, IL	1800	West	280		1	
Grundy 24461	Jim Fergelec	N/A	400	West	320		2	
Will 672	Jay O'Brien	On-Site	-	-	130		1	Inundated
Will 695	E. Marvin	N/A	1000	Southeast	125		1	
Will 696	Bardwell, Jr.	N/A	200	South	95		1	
Will 1209	Des Plaines Game Farm	N/A	13400	Southeast	810		1	
Will 1669	Lorenzo Store	N/A	300	South	95		1	
Will 24931	Illinois Dept. of Conservation	N/A	2800	North	775		1	
Will 25594	Illinois Dept. Of Conservation	N/A	2700	Northeast	260		1	
Will 27909	Tony Grate	26025 Sunfish Ln., Wilmington, IL	2300	East	505		1	
Will 27922	James Kavdak	N/A	6800	East	175		1	
Will 27923	James Lapaso	N/A	7500	Southeast	105		1	
Will 28332	Lorraine Roak	N/A	200	North	380		1	
Will 28332	Robert Hibler	N/A	200	North	380		1	
Will 28375	Robert Patterson	N/A	200	North	305		1	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Will 28396	Robert Patterson	N/A	10000	Southeast	213		1	
Will 28445	Joe Debretto	N/A	10700	Southeast	620		1	
Will 28844	Florence Spencer	N/A	11200	Southeast	565		1	
Will 29116	Joan Buck	24616 Lorenzo Rd., Wilmington, IL	1400	East	180		1	
Will 30362	Sievers	Cottage Rd., Wilmington, IL	300	North	645		1	
Will 31229	Colo Fornelli	N/A	400	South	340		1	
Will 31230	Tony Jadron	N/A	8600	Southeast	110		1	
Will 34472	Rick Stevens	26030 Willow Ln., Wilmington, IL	2500	Northeast	300		1	
Will 34899	Catherine Cualdoni	26062 Muskie Ln., Wilmington, IL	2300	East	74		1	
Will 35954	Gary Grskovic	25618 Cottage Rd., Wilmington, IL	200	North	545		1	
Will 36613	House Of Radiators	28308 Fir Ln., Wilmington, IL	2400	Northeast	100		1	
Will 36689	Charles Novak	25336 Cottage Rd., Wilmington, IL	200	North	445		1	
Will 36795	Pat Bradley	26018 Willow Ln., Wilmington, IL	2600	Northeast	165		1	
Will 36875	Robert Tadej	N/A	300	South	98		1	
Will 37132	Ron Hamilton	30478 W. Frontage Rd., Wilmington, IL	9200	Southeast	156		1	
Will 37160	Leonard Rittoff	26056 Marlin Ct., Wilmington, IL	2000	Northeast	420		1	
Will 37497	Richard Relter	25042 Cottage Rd., Wilmington, IL	200	North	180		1	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Will 37529	James Giertuga	25255 W. Lorenzo Rd., Wilmington, IL	500	South	580		1	
Will 37939	Loyce Cambruzzi	26065 Muskie Ln., Wilmington, IL	2300	East	340		1	
Will 38148	Judy Kavanaugh	30757 S. Kavanaugh Rd., Wilmington, IL	9000	Southeast	600		1	
Will 38149	Alan Onderisin	30265 S. Kavanaugh Rd., Wilmington, IL	5800	South	600		1	
Will 38213	Don Kapinus	26040 Muskie Ln., Wilmington, IL	2300	East	300		1	
Will 28238	Tri-County Well	N/A	200	South	420		1	
Will 38376	William Hoffman	25960 Cottage Rd., Wilmington, IL	200	North	110		1	
Will 38443	Ray Dolasin	S. Kavanaugh Rd., Wilmington, IL	10700	Southeast	600		1	
Will 38718	Michael Mathy	S. Kavanaugh Rd., Wilmington, IL	10400	Southeast	520		1	
Will 38785	Joe Nasadowski	31019 S. Kavanaugh, Wilmington, IL	10500	Southeast	625		1	
Will 38910	Joyce Hinz	Readman Ln., Wilmington, IL	9500	Southeast	605		1	
Will 38915	Ronald Williams	29709 S.Cooper Rd., Wilmington, IL	100	South	312		1	
Will 39297	David Landmichl	S. Kavanaugh Rd., Wilmington, IL	10200	Southeast	600		1	
Will 39433	Louise O'Conner	30631 Readman Ln., Wilmington, IL	10600	Southeast	200		1	
Will 40232	Jessie Overton	29761 S. Cooper Rd., Wilmington, IL	1500	South	320		1	
Will 40428	Michael Koziowski	26357 Willow Ln., Wilmington, IL	1400	Northeast	360		1	
Will 40430	Emmett Mckeller	N/A	8600	Southeast	645		1	

TABLE B.1

SUMMARY OF PRIVATE/PUBLIC WATER WELLS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

County Well ID	*Well Owner*	*Address*	*Approximate Distance From the Site (ft)*	*Direction*	*Well Depth (ft bgs)*	*Gradient*	*Source of Information*	*Comments*
Will 40914	Robert Cartwright	N/A	10800	Southeast	620		1	
Will 40917	William Ferguson	25716 Cottage Rd., Wilmington, IL	200	North	520		1	
Will 41189	Charles Vedder	25540 Cottage Rd., Wilmington, IL	200	North	320		1	
Will 41399	Ron Sorg	24760 Cottage Rd., Wilmington, IL	300	Northeast	600		1	
Will 41398	Matthew Ramuta	25806 Cottage Rd., Wilmington, IL	200	North	425		1	
Will 41459	Robert Johnson	25132 Cottage Rd., Wilmington, IL	200	North	180		1	
Will 41578	Frank Garrone	25148 Cottage Rd., Wilmington, IL	200	North	165		1	

Notes:

This listing is a summary of wells within approximately 2 miles of the Dresden nuclear generating station.
1 - Sundance Environmental and Energy Specialists Ltd., January 31, 2006
2 - Illinois State Geological Survey Online Well Data
N/A - Not available.

2 2

... Binder and holder in leaves, each Patented 1906. ...

2350' E and 1380' S of NW cor. Sec.11. On main ditch & 100' W of Osburn's ditch juncture.

TOWN
COMPANY Goose Lake
FARM
AUTHORITY Core Drill Hole
ELEVATION
COLLECTOR
CONFIDENTIAL

TOWNSHIP
No. 2
No.

DATE DRILLED

Map No. 6
R. 8 E
T. 33 N
Sec. 11

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Peat	3	6	3	6
	Clay, peaty, green	3	6	7	
	Trace of coal			7	
	Clay, dark gray, plastic		3	7	3
	Coal, boney		2	7	5
	Clay, light gray above, darker below, with conchoidal fracture	3	10	11	3
	Coal	1	9	13	
	Clay, dark gray	1	6	14	6
	Clay, sandy shale, varying in hardness and color	5	11	20	5
	Clay, as above but with traces of carbonaceous matter and thin sandy partings	1	1	21	6
	Hard sandy zone		3	21	9
	Shale, dark to light gray with sandy zones of 1" to 6"	11	5	33	2
	Hard gray zone		11	34	1
	Shale, dark to light gray with sandy zones 1" to 8"	9	5	43	6
	Shale, greenish gray, varying sandiness, small pyrites streaks near bottom	8	6	52	

COUNTY No. 570

...nty Grundy
...-DRILL RECORD

Index No. 0611

11-33N-8E
(67729—3M—6-27)

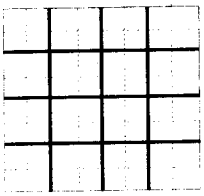
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
soil	0	3
yellow clay	3	19
limestone-shale	19	39
shale	39	110
soapstone	110	130
Total Depth		130

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Smith T H
FARM Obrien Jay
DATE DRILLED January 1, 1948 **NO.**
ELEVATION 510GL **COUNTY NO.** 00672
LOCATION 900'S line, 2640'E line of section
LATITUDE 41.349342 **LONGITUDE** - 88.238935
COUNTY Will **API** 121970067200



7 - 33N - 9E

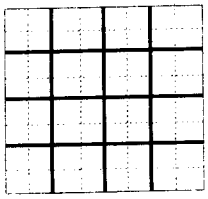
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
soil	0	2
gravel	2	15
blue clay	15	23
limestone	23	61
shale	61	95
limestone	95	125
Total Depth		125

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Smith T H
FARM Mavin E
DATE DRILLED January 1, 1946 **NO.**
ELEVATION 0 **COUNTY NO.** 00695
LOCATION 300'N line, 300'E line of section
LATITUDE 41.346387 **LONGITUDE** - 88.211647
COUNTY Will **API** 121970069500 **17 - 33N - 9E**



(575—5M—

N Lorenzo TOWNSHIP Wilmington MAP No. 21

PANY

M Bardwell, Jr.

HORITY T.F. Anderson

VATION 530' HOLE No.

LECTOR H.E.C. DATE DRILLED Jan. 15, 1913

9E

33 N

18 NW NE NE

STRATA	Elev.	THICKNESS FEET	IN.	DEPTH FEET	IN.
Sand & hard pan	503	27		27	
Shale, green	498	5		32	
Shale	485	13		45	
Shell rock, hard	435	50		95	

Casing 48' of 7".

COUNTY No. 696

41 34 42 — 88 23 23 41

NO ENVELOPE

nty Will

DRILL RECORD

Index No. 2118

18-33N-9E

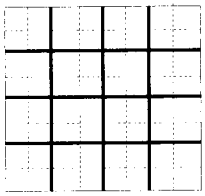
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		1499

Driller's Log filed
Survey Sample Study filed
Sample set # 30332 (0' - 785')
Sample set # 56258 (0' - 1500')

Permit Date: **Permit #:** 0

COMPANY Wehling Well Works Inc.
FARM Dresden Nuc Pow Sta
DATE DRILLED January 1, 1957 **NO.** 1
ELEVATION 510GL **COUNTY NO.** 00908
LOCATION 690'N line, 240'E line of section
LATITUDE 41.387750 **LONGITUDE** - 88.269639
COUNTY Grundy **API** 120630090800 **35 - 34N - 8E**



UTM NAD83

Easting	Northing	Elev
392858.7	4379+31.9	520

Town Divine Township Felix R. 8E

Company

Farm Illinois Clay Products No. Co. T. 33 N Sec. ~~10~~ 11

Authority Summary Sample Study

Elevation 520 top. map

Collector

Confidential Date Drilled

400'S 1700'E of NWc

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Studied by J. N. Payne, June 1937				
	No samples, no record	71		71	
	ORDOVICIAN SYSTEM				
	Mohawkian series				
	Galena formation				
	Dolomite, white to light brown, to tan, medium, vesicular	44		115	
	Dolomite, tan to buff to white, medium, shaly surfaces; clay, white, dolomitic, smooth	10		125	
	Dolomite, light buff, medium, vesicular	60		185	
	Dolomite, light buff, medium, vesicular, slightly cherty; clay, green	5		190	
	Dolomite, slightly cherty, light buff, medium	20		210	
	Decorah formation				
	Dolomite, light buff to gray, shaly surfaces; shale, brown	25		235	
	Shale, calcareous, brown; dolomite, brown to light buff, shaly surfaces	10		245	
	Platteville formation				
	Dolomite, light brown to buff, fine to medium, shaly surfaces at base	35		280	
	Dolomite, brown to buff to gray, fine, slightly cherty	10		290	
	~~Dolomite, partly argilla-~~				

COUNTY Grundy Sample Set #329 ~~10~~ 11-33N-8E

(40430—20M) ILLINOIS GEOLOGICAL SURVEY, URBANA (3-43) [redacted]2

TOWN Dudgeons Corner TOWNSHIP

COMPANY T.F. Anderson

FARM Dudgeon, F M

AUTHORITY T. F. Anderson

ELEVATION 520 T.M.

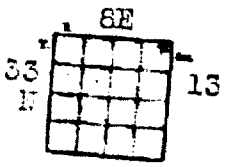
COLLECTOR H.E.C.

HOLE No

DATE DRILLED September 18, 1920

1575—5M—7-24

MAP No. 6



No.	STRATA	Elev.	THICKNESS Feet	In.	DEPTH Feet	In.
	Surface	500				
	Soapstone		20		20	
	Sand rock, hard (Penn.)	?	56		76	
	Shale, hard (Mag?)	440	4		80	
	Limestone, Galena	380	60		140	
		220	160		300	

6 foot flow

Casing: 113' of 4½" black.
27' of 4½" Galvanized.

UTM NAD83

Easting	Northing	Elev.
395507.05	4577956.41	512

NO ENVELOPE

County Grundy

DRILL RECORD

Index No. 0613

13-33N-8E

Lancaster, N. Y. Binder and holes in leaves Patented. FORM 103309

TOWN Coal City TOWNSHIP Felix
COMPANY J. T. Anderson NO. MAP No. 6
FARM Brown, Walter NO R. 8E
AUTHORITY J. T. Anderson T. 33 N SEC. 14
ELEVATION 550 T M.
COLLECTOR
CONFIDENTIAL DATE DRILLED Jan. 1941
900' S. line, 70' E. line

NO.	STRATA	THICKNESS FEET	THICKNESS IN.	DEPTH FEET	DEPTH IN.
	Sand	20		20	
	Clay	14		34	
	Sand	2		36	
	Shale	39		75	
	Limestone	8		83	
	Shale	2		85	
	Sandstone	16		101	
	Shale	63		164	
	Limestone			276	

Water level 57'
Casing 165' of 4½" pipe
Capacity 10 g.p.m. with 40' drawdown.

REPORT OF GAS FLOW MEASUREMENT by W.F. Meents
July 24, 1969

Type of pump - submersible, set at about 150'?
Barometer Reading - 29.24"
Gas Volume - In 5 minutes - ¾" of gas in mason jar under water with 3 gallons water per minute passing thru.
NOTE: Pump will pump water off (below pump intake) in 15 minutes. Well is used for stock only. Well pit has exploded several times due to escaping gas.

UTM NAD83
Easting 413934.1
Northing 4576413.3
Elev. 548'

COUNTY Grundy
ILL RECORD
INDEX NO. 0614
572—15M—10-39)
ILLINOIS GEOLOGICAL SURVEY, URBANA
14-33N-8E

ILLINOIS GEOLOGICAL SURVEY, URBANA (71931—10M—2-49)

Cable Tools Studied by T.C. Buschbach 9/49 Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
PLEISTOCENE SYSTEM				
"Sand"	20		20	
"Clay"	14		34	
"Sand"	2		36	
PENNSYLVANIAN SYSTEM				
"Shale"	39		75	
"Limestone"	8		83	
"Shale"	2		85	
"Sandstone"	16		101	
"Shale"	63		164	
ORDOVICIAN SYSTEM				
Galena formation				
"Limestone"	6		170	
Dolomite, very calcareous, white to light buff, fine to medium, crystalline; grades to limestone, dolomitic, white, sublithographic to coarse, fossiliferous	105		275	

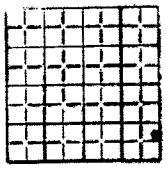
COMPANY J.T. Anderson NO.

FARM Brown, Walter NO.

TYPE DRILLED Jan. 1941 COUNTY NO. 1154

AUTHORITY Summary Sample Study

LOCATION 550' T.M. (E.st.)
900' S. line, 70' E. line of Section
S.S. #5633



14-33N-8E

COUNTY

ILLINOIS STATE GEOLOGICAL SURVEY

	Top	Bottom
s,wh-orn,fmd,tr crs,subangr-subrndd,inco	0	6
si,calc,orn,tgh;dol,vy sty,grn,vfly xln	6	10
shale,dolc,sty,bf,wk;dol,as abv,brn-grn	10	25
shale, dolc, sty,grn-gry,wk;dol as abv	25	40
shale,dolc,sty,bf,wk;dol,gry,vy fly xln	40	50
sh,dolc,sty,gry;dol,sty,bf,gry,vfly xln	50	75
sh,calc,sty,bf-gry,wk;ls,bf,lthog-f xln	75	110
ls,vy pyrc,sty,gry,subl,f xln,mtld,fosf	110	140
ls,med xln;dol,sty,calc,brn,f xln,si	140	145
sh,sty,calc,brn,wk;si,dolc-calc,brn;ls,x	145	165
shale,sty,calc,brn,weak; si, as above	165	170
si,vy calc,bf-gry,brit,grdg to ls,sty,lt	170	175
sh,sty,calc,brn,wk;ls,bf,vy f-f xln;si	175	229
dol,sty,calc,bf,fmd,vf xln,grdg ls,dolc	229	250
dol,as above,red-brn sh ptg,grdg to ls	250	275
dol,sty,pyrc,buff,f-med,vy f xln	275	290
ls,pyrc,sty,dolc,bf,wh,vf xln,grdg dol	290	315
dol,as above,grading to ls,as above	315	320
dol,calc,sty,bf,f,f-med xln,orn dolc cmt	320	395
ls,colc,sty,buff,f-med xln,blk,rd spkld	395	420
dol,calc,sty,buff,f xln,trc chert	420	465
ls,doc,bf,lithog,vt f xln,grdg to dol	465	470
dol,calc,gry-wh,vy f xln,mtld	470	490
dol,brn,buff,vy f xln,mtld	490	560

Permit Date: **Permit #:** 0

COMPANY Layne Western Co., Inc.

FARM Des Plaines Game Farm

DATE DRILLED January 1, 1961 **NO.** 1

ELEVATION 552ES **COUNTY NO.** 01209

LOCATION 1650'N line, 500'E line of section

LATITUDE 41.329201 **LONGITUDE** - 88.172979

COUNTY Will **API** 121970120900 **22 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

dol,calc,buff-gray,vy f xln,mtld	560	578
ss,wh,vf-med,trc crs,rndd-subrndd,frstd	578	590
ss,wh,f-med,trc crs,rndd-subrndd,frosted	590	655
ss, as above	655	690
ss, as above	690	720
ss,dolc,sty,trc crs,rndd/sub,frstd,incoh	720	810
medium white sandstone	810	813
Total Depth		810

Driller's Log filed
Survey Sample Study filed
Sample set # 39950 (0' - 810')

Additional location info: Lot , subdivision.

Address of well:

Location source:

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
S.S.#9826 0' - 90'	0	0
soil, rock & clay	0	20
limestone	20	40
brown sandstone	40	62
shale	62	90
Total Depth		90

Casing: 4.5" PIPE from 0' to 33'

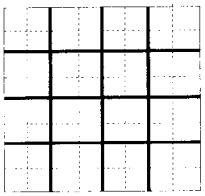
Size hole below casing: 4.5"

Water from shale at 0' to 90'.
Static level 10' below casing top which is 0' above GL
Pumping level 0' when pumping at 12 gpm for 22 hours

Driller's Log filed
Sample set # 9826 (0' - 90')

Permit Date: June 16, 1943 **Permit #:** 0

COMPANY Anderson, J. T.
FARM Nickolson, B. C.
DATE DRILLED June 24, 1943 **NO.**
ELEVATION 520GL **COUNTY NO.** 01336
LOCATION 1000'N line, 1200'E line of SE
LATITUDE 41.379580 **LONGITUDE** - 88.272945
COUNTY Grundy **API** 120630133600 **35 - 34N - 8E**

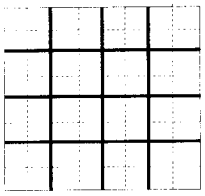


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		203
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Lyons Lewis
DATE DRILLED January 1, 1920 **NO.**
ELEVATION 508GL **COUNTY NO.** 01337
LOCATION SW SW
LATITUDE 41.377056 **LONGITUDE** - 88.266068
COUNTY Grundy **API** 120630133700 **36 - 34N - 8E**



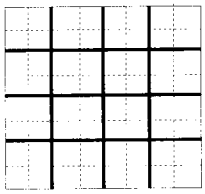
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		383

Driller's Log filed
Sample set # 55591 (5' - 383')

Permit Date: **Permit #:** 0

COMPANY Wehling Well Works Inc.
FARM G E Similator Bld
DATE DRILLED May 1, 1968 **NO.** 1
ELEVATION 0 **COUNTY NO.** 01509
LOCATION 330'S 230'E NW/c NE NW SE
LATITUDE 41.381382 **LONGITUDE** - 88.274948
COUNTY Grundy **API** 120630150900 **35 - 34N - 8E**



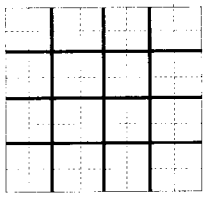
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		788

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Wehling Well Works Inc.
FARM General Elec Co
DATE DRILLED October 1, 1968 **NO.**
ELEVATION 509TM **COUNTY NO.** 01519
LOCATION NE SE SE
LATITUDE 41.377887 **LONGITUDE** - 88.269706
COUNTY Grundy **API** 120630151900 **35 - 34N - 8E**



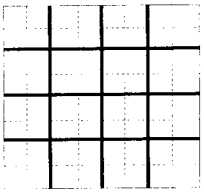
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		706

Driller's Log filed
Sample set # 56231 (45' - 706')

Permit Date: **Permit #:** 0

COMPANY Layne Western Co., Inc.
FARM Reichhold Chem Inc
DATE DRILLED February 1, 1969 **NO.** 1
ELEVATION 0 **COUNTY NO.** 01525
LOCATION 95'N line, 1120'W line of NW
LATITUDE 41.388514 **LONGITUDE** - 88.303102
COUNTY Grundy **API** 120630152500 **34 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
soil	0	2
gravel	2	4
clay - Nigger heads	4	10
hardpan	10	40
clay	40	48
gravel	48	58
shale	58	89
limestone & shale	89	95
Total Depth		95

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY

FARM Lorenzo Store

DATE DRILLED May 1, 1950 **NO.**

ELEVATION 0 **COUNTY NO.** 01669

LOCATION SE SW SE

LATITUDE 41.348104 **LONGITUDE** - 88.216416

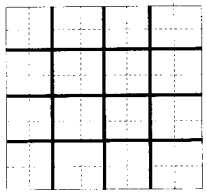
COUNTY Will **API** 121970166900 **8 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		94

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Osbourne Wm
DATE DRILLED November 1, 1907 **NO.**
ELEVATION 0 **COUNTY NO.** 01769
LOCATION NW SE SE
LATITUDE 41.363357 **LONGITUDE** - 88.271567
COUNTY Grundy **API** 120630176900 **2 - 33N - 8E**



SHEET 2 T. 33N R. 8E S. 10

COMPANY

FARM Illinois Clay Products CO. HOLE NO.

No.	Strata	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	ceous, gray to brown to buff	5		295	
	Dolomite, gray to brown to buff, fine, compact	10		305	
	Dolomite, light buff to brown, fine, compact	20		325	
	Dolomite, grayish brown to brownish gray, very fine, compact	65		390	
	Glenwood formation				
	Dolomite, silty, sandy, buff, fine, crystalline	10		400	
	Dolomite, sandy, light buff to gray; sandstone, white, fine	10		410	
	Dolomite as above; shale, sandy, gray	10		420	
	Dolomite, silty, buff, very fine	5		425	
	Dolomite, sandy, buff to g gray; sandstone, white, fine to coarse, incoherent	10		435	
	Shale, silty, gray	5		440	
	Chazyan series				
	St. Peter formation				
	Sandstone, dolomitic, light gray, very fine to coarse	25		465	
	Sandstone, white, very fine to coarse, incoherent	35		500	

COUNTY Grundy Sample Set #329 ~~10~~ 11-33N-8E

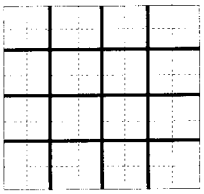
(37231—20M—1-43) ILLINOIS GEOLOGICAL SURVEY, URBANA

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		113
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Osbourne Wm
DATE DRILLED December 1, 1915 **NO.**
ELEVATION 0 **COUNTY NO.** 01770
LOCATION SE NE SE
LATITUDE 41.365219 **LONGITUDE** - 88.269242
COUNTY Grundy **API** 120630177000

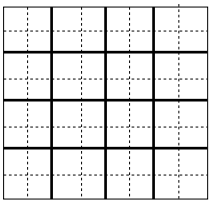


2 - 33N - 8E

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		105
Driller's Log filed		
Permit Date: **Permit #:** 0		

COMPANY Anderson & Son, T. F.
FARM Anderson Wm
DATE DRILLED February 1, 1911 **NO.**
ELEVATION 0 **COUNTY NO.** 01777
LOCATION NE NW NE
LATITUDE 41.359682 **LONGITUDE -** 88.273851
COUNTY Grundv **API 120630177700** **11 - 33N - 8E**



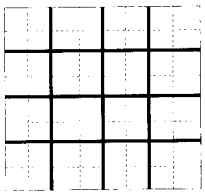
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
soil	0	3
sandstone	3	53
limestone	53	61
soapstone	61	132
limestone	132	157
Total Depth		157

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Underwood Martin
DATE DRILLED October 1, 1912 **NO.**
ELEVATION 0 **COUNTY NO.** 01782
LOCATION NE NW NW
LATITUDE 41.359930 **LONGITUDE** - 88.264312
COUNTY Grundy **API** 120630178200 **12 - 33N - 8E**



Northing 457848.59
Elev. 520.

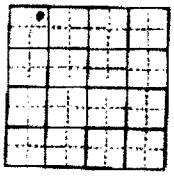
ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
Soil	6		6
Fire clay	20		26
Boulders	14		40
Soapstone	100		140
Limestone	50		190
			TD
Water Level - flow			

ENVELOPE

COMPANY T.F. Anderson
Trotter, George
DRILLED November 22, 1921
AUTHORITY State Water Survey
LOCATION
SECTION NE NW NW
COUNTY GRUNDY

NO.
COUNTY NO. [redacted]



13-33N-8E

ILLINOIS GEOLOGICAL SURVEY, URBANA

	Thickness	Top	Bottom
rift	14		14
ıale	41		55
andstone	30		85
ıale	10		95
			TD

ıter level: 14' - 20 gallons per minute.

ısing: 55' of 6"

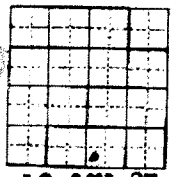
UTM NAD83

Easting	Northing	Elev.
394743.66	4572044.83	520

ENVELOPE

ANY J.T. Anderson
Goose Lake School
DRILLED July 31, 1959
ORITY State Water Survey
ATION
TION SW SW SE
TY GRUNDY

NO.
COUNTY NO. 1788



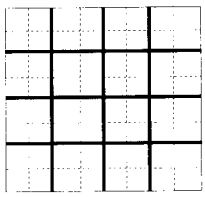
12-33N-8E

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		197
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Craymer A J
DATE DRILLED May 1, 1901 **NO.**
ELEVATION 0 **COUNTY NO.** 01999
LOCATION SW SE SW
LATITUDE 41.390595 **LONGITUDE** - 88.262832
COUNTY Grundy **API** 120630199900 **25 - 34N - 8E**

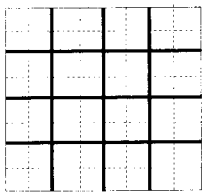


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		203
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM State Of Ill
DATE DRILLED February 1, 1929 **NO.**
ELEVATION 0 **COUNTY NO.** 02000
LOCATION SW SW NE
LATITUDE 41.397555 **LONGITUDE -** 88.277695
COUNTY Grundy **API** 120630200000 **26 - 34N - 8E**

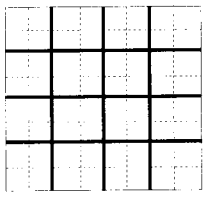


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		190
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Wainwright W L
DATE DRILLED January 1, 1911 **NO.**
ELEVATION 0 **COUNTY NO.** 02001
LOCATION NW SW SE
LATITUDE 41.392170 **LONGITUDE** - 88.277399
COUNTY Grundy **API** 120630200100 **26 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		188
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.

FARM Collins F

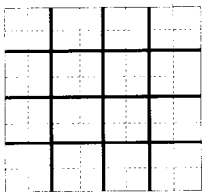
DATE DRILLED November 1, 1909 **NO.**

ELEVATION 0 **COUNTY NO.** 02010

LOCATION SE NE NE

LATITUDE 41.386478 **LONGITUDE** - 88.289188

COUNTY Grundy **API** 120630201000 **34 - 34N - 8E**

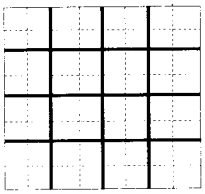


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		240
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Collins Frank
DATE DRILLED August 1, 1916 **NO.**
ELEVATION 0 **COUNTY NO.** 02011
LOCATION SW SW NE
LATITUDE 41.382647 **LONGITUDE** - 88.296230
COUNTY Grundy **API** 120630201100



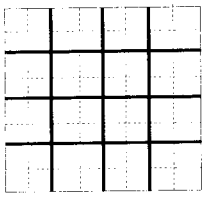
34 - 34N - 8E

ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		237
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Collins O E
DATE DRILLED August 1, 1926 **NO.**
ELEVATION 0 **COUNTY NO.** 02012
LOCATION SE NE NW
LATITUDE 41.386191 **LONGITUDE** - 88.298756
COUNTY Grundy **API** 120630201200 **34 - 34N - 8E**

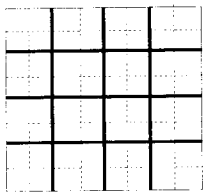


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		164
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Collins O E
DATE DRILLED July 1, 1920 **NO.**
ELEVATION 0 **COUNTY NO.** 02013
LOCATION NE SW NW
LATITUDE 41.384238 **LONGITUDE** - 88.303481
COUNTY Grundy **API** 120630201300 **34 - 34N - 8E**

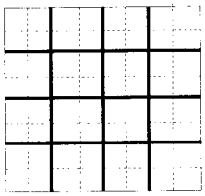


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		204
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Melbourne S
DATE DRILLED July 1, 1905 **NO.**
ELEVATION 0 **COUNTY NO.** 02014
LOCATION SE SE NE
LATITUDE 41.383313 **LONGITUDE** - 88.269850
COUNTY Grundy **API** 120630201400 **35 - 34N - 8E**

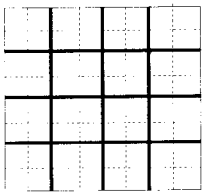


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		200

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Collins
DATE DRILLED September 1, 1904 **NO.**
ELEVATION 0 **COUNTY NO.** 02019
LOCATION NW SW NE
LATITUDE 41.384456 **LONGITUDE** - 88.296297
COUNTY Grundy **API** 120630201900 **34 - 34N - 8E**

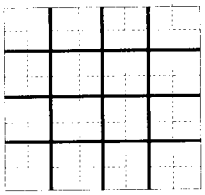


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		200
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Osbourne C
DATE DRILLED April 1, 1904 **NO.**
ELEVATION 0 **COUNTY NO.** 02020
LOCATION SE NE SE
LATITUDE 41.379697 **LONGITUDE** - 88.269754
COUNTY Grundy **API** 120630202000 **35 - 34N - 8E**

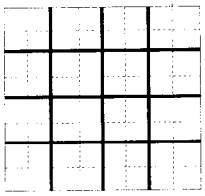


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		146
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Osbourne C
DATE DRILLED April 1, 1904 **NO.**
ELEVATION 0 **COUNTY NO.** 02021
LOCATION NW NW SE
LATITUDE 41.381339 **LONGITUDE** - 88.276988
COUNTY Grundy **API** 120630202100 **35 - 34N - 8E**

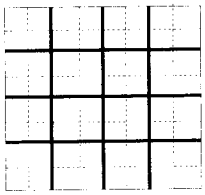


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		267
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Osbourne S & W
DATE DRILLED October 1, 1908 **NO.**
ELEVATION 0 **COUNTY NO.** 02022
LOCATION NW NE SE
LATITUDE 41.381451 **LONGITUDE** - 88.272198
COUNTY Grundy **API** 120630202200 **35 - 34N - 8E**

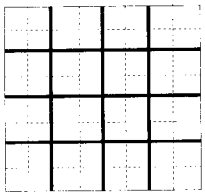


ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		114
Driller's Log filed		

Permit Date: **Permit #:** 0

COMPANY Anderson & Son, T. F.
FARM Wainwright W L
DATE DRILLED November 1, 1915 **NO.**
ELEVATION 0 **COUNTY NO.** 02024
LOCATION SE NW NW
LATITUDE 41.386598 **LONGITUDE** - 88.284382
COUNTY Grundy **API** 120630202400 **35 - 34N - 8E**



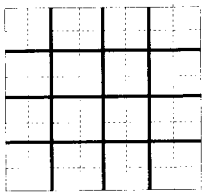
ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		710

Driller's Log filed
Sample set # 61977 (0' - 710')

Permit Date: **Permit #:** 0

COMPANY Layne Western Co., Inc.
FARM Reichhold Inc
DATE DRILLED December 1, 1978 **NO.** 2
ELEVATION 0 **COUNTY NO.** 22367
LOCATION 45'N line, 940'W line of NW
LATITUDE 41.388631 **LONGITUDE** - 88.303766
COUNTY Grundy **API** 120632236700 **34 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	2
clay	2	5
rock	5	60
hard & soft shale	60	125
rock	125	200
Total Depth		200

Casing: 5" PLASTIC from 0' to 40'

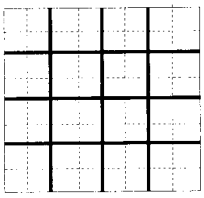
Grout: CEMENT from 0 to 0.
Size hole below casing: 5"

Water from rock at 80' to 200'.
Static level 80' below casing top which is 1' above GL
Pumping level 160' when pumping at 0 gpm for 0 hours
Permanent pump installed at 160' on June 5, 1984, with a capacity of 0 gpm

Driller's Log filed
Location source: Location from permit

Permit Date: May 31, 1984 **Permit #:** 112622

COMPANY Knierim, Phillip E.
FARM Tulumaris, Manny
DATE DRILLED June 1, 1984 **NO.**
ELEVATION 0 **COUNTY NO.** 22428
LOCATION NW SW SW
LATITUDE 41.377934 **LONGITUDE** - 88.267304
COUNTY Grundy **API** 120632242800 **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil & clay	0	4
St. Peters sand	4	38
Total Depth		38

Casing: 5" A-53 15# from 0' to 38'

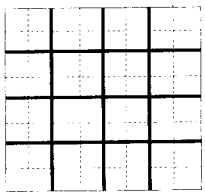
Size hole below casing: 5"

Water from St. Peters sand at 4' to 38'.
Static level 12' below casing top which is 1' above GL
Pumping level 30' when pumping at 0 gpm for 0 hours

Location source: Location from permit

Permit Date: April 30, 1979 **Permit #:** 85038

COMPANY Fykes, Charles N.
FARM Tri-County Well & Pump
DATE DRILLED May 3, 1979 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22583
LOCATION NE NE NE
LATITUDE 41.374268 **LONGITUDE** - 88.269599
COUNTY Grundy **API** 120632258300 **2 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	5
sand	5	15
clay	15	140
limestone	140	265
Total Depth		265

Casing: 5" A-53 15# from 0' to 140'

Size hole below casing: 5"

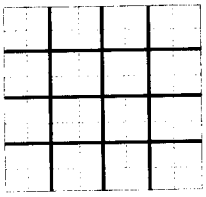
Water from limestone at 140' to 265'.
Static level 150' below casing top which is 1' above GL
Pumping level 165' when pumping at 10 gpm for 1 hour
Permanent pump installed at 160' on , with a capacity of 10 gpm

Address of well: Lorenzo Rd.

Location source: Location from permit

Permit Date: March 16, 1976 **Permit #:** 45327

COMPANY Fykes, Charles N.
FARM Horvat, John
DATE DRILLED May 20, 1976 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22585
LOCATION SW NW SW
LATITUDE 41.350772 **LONGITUDE** - 88.266534
COUNTY Grundy **API** 120632258500 **12 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
overburden	0	44
gravel	44	50
Total Depth		50

Casing: 5" STEEL 15# from 0' to 44'

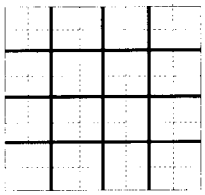
Screen: 8' of 0" diameter 30 slot
Grout: CUTTINGS from 0 to 0.
Size hole below casing: 5"

Water from gravel & sand at 36' to 50'.
Static level 10' below casing top which is 0' above GL
Pumping level 36' when pumping at 20 gpm for 4 hours
Permanent pump installed at 40' on , with a capacity of 20 gpm

Location source: Location from permit

Permit Date: September 9, 1977 **Permit #:** 66574

COMPANY Knierim, Paul L.
FARM Chamberlain, Eugene
DATE DRILLED September 8, 1977 **NO.**
ELEVATION 0 **COUNTY NO.** 22793
LOCATION 350'S line, 355'E line of NE
LATITUDE 41.382361 **LONGITUDE** - 88.308321
COUNTY Grundy **API** 120632279300 **33 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	35
limestone	35	80
shale	80	130
limestone	130	145
Total Depth		145

Casing: 5" A-53 15# from 0' to 40'

Size hole below casing: 5"

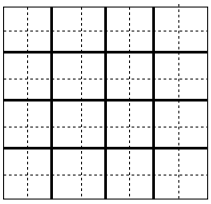
Water from limestone at 130' to 145'.
Static level 35' below casing top which is 1' above GL
Pumping level 60' when pumping at 12 gpm for 1 hour

Additional location info: Lot #38, subdivision.

Location source: Location from permit

Permit Date: July 27, 1977 **Permit #:** 64203

COMPANY Fykes, Charles N.
FARM Brieser, Gery
DATE DRILLED August 10, 1977 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22795
LOCATION NW NE SW
LATITUDE 41.381614 **LONGITUDE -** 88.262562
COUNTY **Grundv** **API** **120632279500** **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	39
limestone	39	60
hard shale	60	100
Total Depth		100

Casing: 5" A-53 15# from 0' to 40'

Size hole below casing: 5"

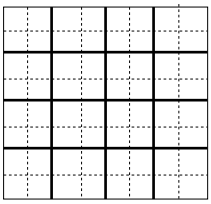
Water from limestone at 39' to 60'.
Static level 50' below casing top which is 1' above GL
Pumping level 65' when pumping at 10 gpm for 1 hour

Additional location info: Lot #39, subdivision.

Location source: Location from permit

Permit Date: July 27, 1977 **Permit #:** 64204

COMPANY Fykes, Charles N.
FARM Brieser, Gery
DATE DRILLED August 6, 1977 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22796
LOCATION NW NE SW
LATITUDE 41.381614 **LONGITUDE -** 88.262562
COUNTY **Grundv** **API** **120632279600** **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	8
limestone	8	245
Total Depth		245

Casing: 5" A-53 15# from 0' to 40'

Grout: CEMENTED from 5 to 40.
Size hole below casing: 5"

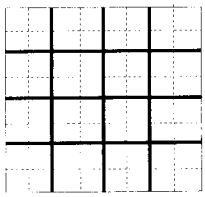
Water from limestone at 8' to 245'.
Static level 100' below casing top which is 1' above GL
Pumping level 100' when pumping at 10 gpm for 1 hour
Permanent pump installed at 140' on , with a capacity of 10 gpm

Address of well: Thorsen Lane

Location source: Location from permit

Permit Date: July 21, 1976 **Permit #:** 49897

COMPANY Fykes, Charles N.
FARM Schmitz, Veronica
DATE DRILLED August 8, 1976 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22804
LOCATION SW SW SW
LATITUDE 41.376130 **LONGITUDE** - 88.267256
COUNTY Grundy **API** 120632280400 **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	5
sand	5	12
shale	12	96
limestone	96	106
sandstone	106	125
Total Depth		125

Casing: 5" A-53 15# from 0' to 96'

Size hole below casing: 5"

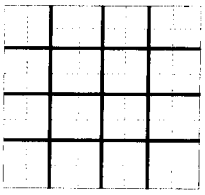
Water from sandstone at 96' to 125'.
Static level 15' below casing top which is 1' above GL
Pumping level 40' when pumping at 12 gpm for 1 hour
Permanent pump installed at 60' on June 13, 1987, with a capacity of 12 gpm

Address of well: County Line Rd.

Location source: Location from permit

Permit Date: June 3, 1987 **Permit #:** 132328

COMPANY Fykes, Charles N.
FARM Bedford, Don
DATE DRILLED June 12, 1987 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22928
LOCATION SE NE SE
LATITUDE 41.336623 **LONGITUDE** - 88.249428
COUNTY Grundy **API** 120632292800 **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	2
clay	2	25
limestone	25	75
shale	75	150
limestone	150	165
Total Depth		165

Casing: 5" A-53 15# from 0' to 40'

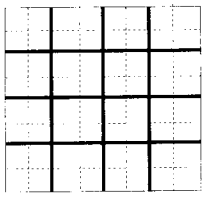
Grout: CEMENT from -5 to 40.
Size hole below casing: 5"

Water from limestone at 40' to 165'.
Static level 20' below casing top which is 1' above GL
Pumping level 80' when pumping at 20 gpm for 1 hour
Permanent pump installed at 100' on November 13, 1987, with a capacity of 12 gpm

Location source: Location from permit

Permit Date: October 22, 1987 **Permit #:** 136530

COMPANY Fykes, Charles N.
FARM Randolph, Doug
DATE DRILLED November 2, 1987 **NO.** 1
ELEVATION 0 **COUNTY NO.** 22948
LOCATION NW SE SW
LATITUDE 41.378023 **LONGITUDE** - 88.262462
COUNTY Grundy **API** 120632294800 **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Water Well	Top	Bottom
Total Depth		300
Sample set # 52732 (3' - 300')		

Permit Date: **Permit #:**

COMPANY Wehling Well Works Inc.

FARM Nat'l Concrete Unit

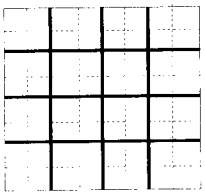
DATE DRILLED **NO.** 2

ELEVATION 0GL **COUNTY NO.** 23159

LOCATION 200'N line, 400'E line of NE

LATITUDE 41.389086 **LONGITUDE** - 88.270255

COUNTY Grundy **API** 120632315900 **35 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	5
shale	5	20
limestone	20	70
shale	70	120
limestone	120	290
Total Depth		290

Casing: 5" PVC from 0' to 45'

Grout: BENT SLRY CTGS from 0 to 45.
Water from limestone at 120' to 290'.
Static level 180' below casing top which is 1' above GL
Pumping level 200' when pumping at 0 gpm for 4 hours
Permanent pump installed at 200' on November 17, 1994, with a capacity of 12 gpm

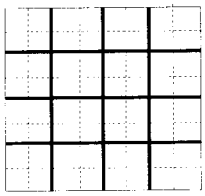
Additional location info: Lot #8, Thorson subdivision.

Address of well: 8095 Blanchard Circle

Location source: Location from permit

Permit Date: October 4, 1994 **Permit #:**

COMPANY Fordonski, Keith
FARM Massey, Rich
DATE DRILLED November 7, 1994 **NO.**
ELEVATION 0 **COUNTY NO.** 23313
LOCATION NE NW SW
LATITUDE 41.381581 **LONGITUDE** - 88.264979
COUNTY Grundy **API** 120632331300 **36 - 34N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
brown clay	0	8
clay & shale	8	15
gray clay	15	17
sandrock	17	79
Cahokia shale	79	82
Total Depth		82

Casing: 6" SDR 21 from 0' to 32'

Grout: BENTONITE from 0 to 32.
Size hole below casing: 6"

Static level 11' below casing top which is 1' above GL
Pumping level 56' when pumping at 0 gpm for 1 hour
Permanent pump installed at 60' on February 4, 1996, with a capacity of 12 gpm

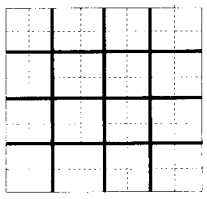
Additional location info: Lot #6, Cardinal Lake subdivision.

Address of well: 4490 Dresden Rd.
Morris, IL

Location source: Location from permit

Permit Date: October 19, 1995 **Permit #:**

COMPANY Wills, Elmer
FARM Schmitt, Frank & Claudette
DATE DRILLED February 1, 1996 **NO.**
ELEVATION 0 **COUNTY NO.** 23493
LOCATION SW NW SW
LATITUDE 41.350772 **LONGITUDE** - 88.266534
COUNTY Grundy **API** 120632349300 **12 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
black dirt	0	3
blue clay	3	15
gray shale	15	85
brown limestone	85	385
Total Depth		385

Casing: 5" A-53 STEEL 15# from -1' to 90'

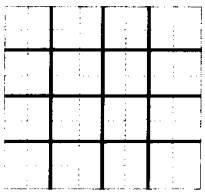
Grout: BENTONITE from 0 to 90.
Water from limestone at 85' to 385'.
Static level 120' below casing top which is 1' above GL
Pumping level 260' when pumping at 15 gpm for 1 hour
Additional location info: Lot #9, subdivision.

Address of well: 5150 N. Dresden

Location source: Location from permit

Permit Date: February 20, 1997 **Permit #:** 063-012

COMPANY Matherly, Hubert
FARM McCormick, James
DATE DRILLED April 7, 1997 **NO.**
ELEVATION 0 **COUNTY NO.** 23526
LOCATION NW NW NW
LATITUDE 41.359852 **LONGITUDE** - 88.266670
COUNTY Grundy **API** 120632352600 **12 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	2
clay	2	6
gravel	6	10
clay	10	33
hard gray rock	33	138
white lime	138	205
shale	205	220
Total Depth		220

Casing: 5" 200 PSI SDR 21 from 0' to 80'

Grout: BENTONITE from 0 to 80.
Water from limestone at 180' to 205'.
Static level 100' below casing top which is 1' above GL
Pumping level 160' when pumping at 5 gpm for 1 hour

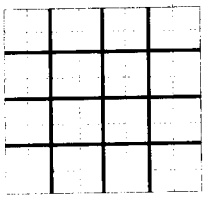
Additional location info: Lot #3, Smokey Hills subdivision.

Address of well: 3830 N. Diesden
Coal City, IL

Location source: Location from permit

Permit Date: March 19, 1996 **Permit #:**

COMPANY Stinnett, David
FARM Scwantes, Bill/Saunders, Jill
DATE DRILLED September 24, 1996 **NO.**
ELEVATION 0 **COUNTY NO.** 23548
LOCATION SW NW NW
LATITUDE 41.343515 **LONGITUDE** - 88.266375
COUNTY Grundy **API** 120632354800



13 - 33N - 8E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	15
shale	15	105
limestone	105	290
Total Depth		290

Casing: 5" BLACK from 0' to 105'

Grout: BENTONITE from 0 to 105.

Static level 12' below casing top which is 0' above GL
Pumping level 260' when pumping at 0 gpm for 2 hours
Permanent pump installed at 260' on December 9, 1996, with a capacity of 7 gpm

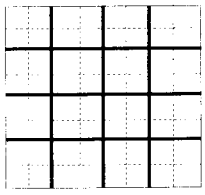
Additional location info: Lot #11, subdivision.

Address of well: Dresden Rd.
Morris, IL

Location source: Location from permit

Permit Date: June 25, 1996 **Permit #:** 063-101

COMPANY Bisping, Calvin
FARM Bettenhauser, Ronald
DATE DRILLED September 10, 1996 **NO.**
ELEVATION 0 **COUNTY NO.** 23550
LOCATION SW SW SW
LATITUDE 41.361664 **LONGITUDE** - 88.266718
COUNTY Grundy **API** 120632355000 **1 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Noncommunity - Public Water Well	Top	Bottom
sand & clay	0	5
limestone	5	55
green shale	55	130
gray lime	130	160
shale seam dark gray	160	165
gray lime	165	460
Total Depth		460

Casing: 6" STEEL A53 from 0' to 43'
4" A53 W/K PACKERS from 25' to 170'

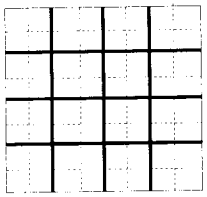
Grout: NEAT CEMENT from 0 to 42.
Water from limestone at 170' to 460'.
Static level 250' below casing top which is 1' above GL
Pumping level 300' when pumping at 20 gpm for 2 hours
Additional location info: Lot , Goose Lake subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: November 12, 1996 **Permit #:** 063-170

COMPANY Kerry, Charles M.
FARM Dresden Nuclear Plant
DATE DRILLED March 21, 1997 **NO.**
ELEVATION 0 **COUNTY NO.** 23556
LOCATION NE NE NW
LATITUDE 41.374053 **LONGITUDE** - 88.279132
COUNTY Grundy **API** 120632355600 **2 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	3
sand & gravel	3	10
shale	10	30
sand & gravel	30	40
gummy shale	40	48
blue shale	48	60
brown shale	60	70
gray limestone	70	90
gummy shale	90	95
sandy gray lime 5 gpm	95	127
shale & pyrite	127	164
limestone	164	167
Total Depth		167

Casing: 5" SCH 40 ASA-53 from -2' to 72'

Size hole below casing: 4.87"

Water from sandy gray lime at 95' to 127'.
Static level 30' below casing top which is 2' above GL

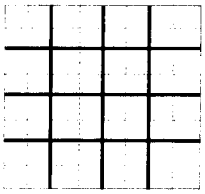
Additional location info: Lot 4, Smokey Hills subdivision.

Address of well: 3870 N. Dresden Rd.
Coal City, IL

Location source: Location from permit

Permit Date: May 10, 1996 **Permit #:** 063-073

COMPANY Wehling, Robert
FARM Shetina, Kenneth & Dawn
DATE DRILLED August 9, 1996 **NO.** 1
ELEVATION 0 **COUNTY NO.** 23603
LOCATION SW NW NW
LATITUDE 41.343515 **LONGITUDE** - 88.266375
COUNTY Grundy **API** 120632360300 **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
fill	0	3
brown clay	3	8
shale	8	23
sandrock	23	77
Total Depth		77

Casing: 6" SDR 17 from 0' to 40'

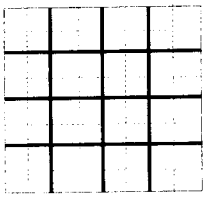
Grout: BENSEAL from 0 to 40.
Water from shale at 8' to 77'.
Static level 8' below casing top which is 1' above GL
Pumping level 40' when pumping at 10 gpm for 4 hours
Additional location info: Lot , subdivision.

Address of well: 4530 N. Dresden Rd.
Morris, IL

Location source: Location from permit

Permit Date: March 12, 1998 **Permit #:** 063-022

COMPANY Wills, William D.
FARM Price, Larry W.
DATE DRILLED September 30, 1998 **NO.**
ELEVATION 0 **COUNTY NO.** 23663
LOCATION NW SW NW
LATITUDE 41.356219 **LONGITUDE** - 88.266615
COUNTY Grundy **API** 120632366300 **12 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Non Potable Water Well	Top	Bottom
clay	0	15
shale	15	71
sandrock	71	75
Maquoketa shale	75	99
Trenton	99	451
St. Peter	451	700
Total Depth		700

Casing: 8" STEEL from 0' to 103'

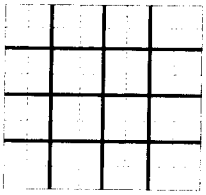
Grout: BENSEAL from 0 to 103.
Water from St. Peter at 190' to 700'.
Static level 190' below casing top which is 1' above GL
Pumping level 441' when pumping at 0 gpm for 0 hours
Additional location info: Lot , subdivision.

Address of well: Pine Bluff Rd.
Morris, IL

Location source: Location from permit

Permit Date: August 24, 1999 **Permit #:**

COMPANY Wills, William D.
FARM Grohne, Dave
DATE DRILLED September 1, 1999 **NO.**
ELEVATION 0 **COUNTY NO.** 23768
LOCATION SW SW SE
LATITUDE 41.346925 **LONGITUDE** - 88.276033
COUNTY Grundy **API** 120632376800 **11 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
gray clay	0	30
clay, gummy shale	30	40
gray lime	40	61
shale, gummy shale, lime	61	87
shale, gummy shale, brown lime	87	180
gray lime	180	198
gray lime gummy shale	198	220
gray lime	220	270
sand	270	273
gray lime	273	287
Total Depth		287

Casing: 6" STEEL ASA 53 from 1' to 50'

Grout: MOUNDED BENT. from 0 to 0.
Size hole below casing: 5.87"

Water from limestone at 273' to 287'.
Static level 167' below casing top which is 1' above GL
Pumping level 200' when pumping at 0 gpm for 2 hours
Permanent pump installed at 180' on September 23, 1999, with a capacity of 0 gpm

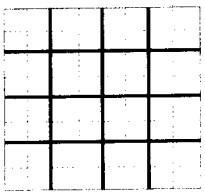
Additional location info: Lot 2, Smokey Hill subdivision.

Address of well: 3780 N. Dresden Rd.
Coal City, IL

Location source: Location from permit

Permit Date: May 26, 1999 **Permit #:**

COMPANY Edward Hall - Web Well & Pump
FARM Berry, Jeffrey & Tammy
DATE DRILLED September 21, 1999 **NO.** 1
ELEVATION 0 **COUNTY NO.** 23769
LOCATION SW NW NW
LATITUDE 41.343515 **LONGITUDE** - 88.266375
COUNTY Grundy **API** 120632376900 **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
fill	0	5
gray clay	5	18
shale	18	90
Trenton limestone	90	300
Total Depth		300

Casing: 6" SDR 21 from 0' to 44'

Grout: BENSEAL from 0 to 44.

Static level 154' below casing top which is 1' above GL
Pumping level 200' when pumping at 15 gpm for 3 hours

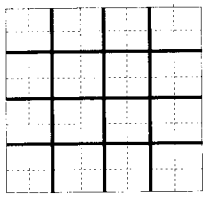
Additional location info: Lot , subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: May 4, 2000 **Permit #:**

COMPANY Wills, William D.
FARM Kemmerling, Ray
DATE DRILLED May 1, 2000 **NO.**
ELEVATION 0 **COUNTY NO.** 23861
LOCATION NW SW SW
LATITUDE 41.363471 **LONGITUDE** - 88.266785
COUNTY Grundy **API** 120632386100 **1 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	1
yellow clay	1	8
gray shale & clay	8	15
cap rock	15	16
sandrock	16	18
hard gray shale	18	30
shale	30	91
Trenton lime	91	280
Total Depth		280

Casing: 5" SDR 21 from 0' to 95'

Grout: BENSEAL from 0 to 95.
Water from limestone at 200' to 280'.
Static level 160' below casing top which is 1' above GL
Pumping level 0' when pumping at 15 gpm for 2 hours
Permanent pump installed at 260' on , with a capacity of 10 gpm

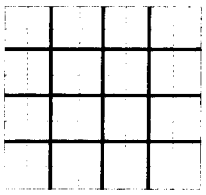
Additional location info: Lot , subdivision.

Address of well: 4800 North Dresden Rd.
Morris, IL

Location source: Location from permit

Permit Date: November 6, 2000 **Permit #:**

COMPANY Wills, William D.
FARM English, Tim
DATE DRILLED **NO.**
ELEVATION 0 **COUNTY NO.** 23974
LOCATION NW NW SW
LATITUDE 41.352590 **LONGITUDE** - 88.266560
COUNTY **Grundy** **API 120632397400** **12 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	2
clay	2	34
sand gravel	34	62
shale	62	143
rock	143	400
Total Depth		400

Casing: 6" BLACK STEEL from -1' to 62'
4.5" PVC from -1' to 160'

Grout: BENTONTIE from 0 to 62.
Water from rock at 160' to 400'.
Static level 140' below casing top which is 1' above GL
Pumping level 260' when pumping at 12 gpm for 4 hours
Permanent pump installed at 260' on August 31, 2001, with a capacity of 12 gpm

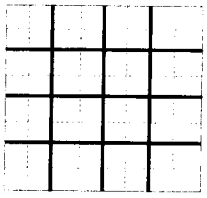
Additional location info: Lot 2, Meadow Ridge subdivision.

Address of well: 3920 Coneflower Dr.

Location source: Location from permit

Permit Date: March 22, 2001 **Permit #:**

COMPANY Walters, Larry
FARM Greco, Kevin & Dawn
DATE DRILLED August 30, 2001 **NO.** 2
ELEVATION 0 **COUNTY NO.** 24054
LOCATION SW NW NE
LATITUDE 41.343737 **LONGITUDE** - 88.256872
COUNTY **Grundy** **API 120632405400** **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	3
brown clay	3	11
sand & gravel	11	15
gray clay	15	30
gravel	30	32
gray shale	32	47
coal	47	48
Silurian	48	71
black Silurian	71	78
Total Depth		78

Casing: 5" SDR 21 from 0' to 40'

Grout: BENSEAL from 0 to 40.
Water from Silurian at 48' to 78'.
Static level 18' below casing top which is 2' above GL
Pumping level 30' when pumping at 10 gpm for 2 hours
Permanent pump installed at 40' on April 24, 2002, with a capacity of 10 gpm

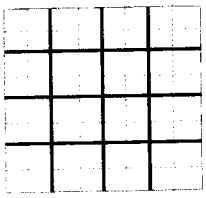
Additional location info: Lot 5, Meadow Ridge subdivision.

Address of well: 3925 Coneflower
Coal City, IL

Location source: Location from permit

Permit Date: January 10, 2002 **Permit #:**

COMPANY Wills, William D.
FARM Jackson, Glen
DATE DRILLED April 16, 2002 **NO.**
ELEVATION 0 **COUNTY NO.** 24244
LOCATION SW NW NE
LATITUDE 41.343737 **LONGITUDE** - 88.256872
COUNTY Grundy **API** 120632424400 **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
strip mine spoil	0	13
gray clay & shale	13	70
Silurian	70	96
Maquoketa	96	168
Trenton	168	530
St. Peter	530	600
Total Depth		600

Casing: 5" STEEL from 0' to 173'

Grout: BENSEAL from 0 to 170.
Water from St. Peter at 0' to 0'.
Static level 224' below casing top which is 2' above GL
Pumping level 260' when pumping at 25 gpm for 2 hours

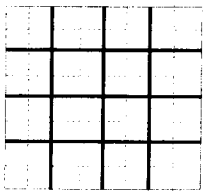
Additional location info: Lot H, White Deer subdivision.

Address of well: 8925 Clover Lane
Coal City, IL

Location source: Location from permit

Permit Date: June 16, 2003 **Permit #:**

COMPANY Wills, William D.
FARM Miller, Carl W.
DATE DRILLED April 9, 2004 **NO.**
ELEVATION 0 **COUNTY NO.** 24338
LOCATION SE NE SE
LATITUDE 41.336623 **LONGITUDE** - 88.249428
COUNTY Grundy **API** 120632433800 **13 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	1
clay	1	6
shale	6	80
lime	80	205
Total Depth		205

Casing: 5" PVC from -1' to 82'

Grout: BENTONITE from 0 to 82.
Water from limestone at 250' to 265'.
Static level 156' below casing top which is 1' above GL
Pumping level 160' when pumping at 12 gpm for 4 hours
Permanent pump installed at 205' on September 11, 2004, with a capacity of 12 gpm

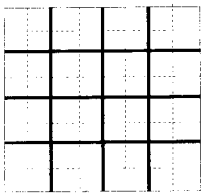
Additional location info: Lot 10, subdivision.

Address of well: Dresden Rd.
Morris, IL

Location source: Location from permit

Permit Date: June 4, 2004 **Permit #:**

COMPANY Doyle, Gerald
FARM Marino, Larry & Tammy
DATE DRILLED September 5, 2004 **NO.** 1
ELEVATION 0 **COUNTY NO.** 24381
LOCATION SW NW SW
LATITUDE 41.365281 **LONGITUDE** - 88.266854
COUNTY Grundy **API** 120632438100 **1 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
drift	0	25
shale	25	80
sandrock & shale streaks	80	104
rock	104	105
shale	105	107
limestone	107	280
Total Depth		280

Casing: 5" PVC SDR 21 from -1' to 111'

Grout: GROUT from 0 to 105.
Water from limestone at 180' to 280'.
Static level 100' below casing top which is 1' above GL
Pumping level 160' when pumping at 20 gpm for 2 hours

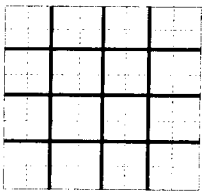
Additional location info: Lot 1, Paradise Lake subdivision.

Address of well: 7755 E Pine Bluff Rd.
Morris, IL

Location source: Location from permit

Permit Date: March 31, 2005 **Permit #:**

COMPANY Area Well & Pump
FARM Hill, Greg
DATE DRILLED April 6, 2005 **NO.** 1
ELEVATION 0 **COUNTY NO.** 24430
LOCATION NE NW NE
LATITUDE 41.345154 **LONGITUDE** - 88.273577
COUNTY Grundy **API** 120632443000 **14 - 33N - 8E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	2
yellow clay	2	11
gray clay	11	20
Slurian	20	46
sandy shale	46	50
Maquketa	50	92
Trenton	92	320
Total Depth		320

Casing: 6" PVC from 0' to 92'

Grout: BENSEAL from 0 to 92.
Water from lime at 92' to 320'.
Static level 197' below casing top which is 3' above GL
Pumping level 260' when pumping at 10 gpm for 1 hour
Permanent pump installed at 280' on September 2, 2005, with a capacity of 10 gpm

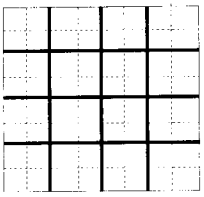
Additional location info: Lot , subdivision.

Address of well: 4960 W. Dresden
Morris, IL

Location source: Location from permit

Permit Date: May 9, 2005 **Permit #:**

COMPANY Wills, William D.
FARM Fergelec, Jim
DATE DRILLED August 22, 2005 **NO.**
ELEVATION 0 **COUNTY NO.** 24461
LOCATION NW SW NW
LATITUDE 41.356209 **LONGITUDE** - 88.266591
COUNTY Grundy **API** 120632446100 **12 - 33N - 8E**



) OF ENVIRONMENTAL HEALTH, 535 WEST
. DO NOT DETACH GEOLOGICAL WATER
ROPE[illegible]LL LOCAT[illegible]N.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Completed 1-24-75 Des Plaines Dept of Conservation

0. Property owner State of Illinois Well No. _____
Address 216 E. Monroe St. Springfield, Illinois
Driller Wehling Well Works License No. 102-2
1. Permit No. 35981 Date _____
2. Water from _____ (Formation) 13. County [illegible]
at depth _____ to _____ ft.
4. Screen: Diam. 10 in.
Length: _____ ft. Slot _____
Sec. 4
Twp. 33N
Rge. 9E
Elev. 517'

5. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	black casing	0	576
	cemented in		

SHOW LOCATION IN SECTION PLAT
100' SL, 650' WL, of section

6. Size Hole below casing: 6 in.
7. Static level 222 ft. below casing top which is _____ ft. above ground level. Pumping level _____ ft. when pumping at _____ gpm for _____ hours.

8. FORMATIONS PASSED THROUGH	THICKNESS ~~TOP~~	DEPTH OF BOTTOM
lack dirt and gravel	0	1
lay and gravel	1	9
hale	9	115
haley lime	115	130
hale	130	205
rown lime	205	275
ime	275	556
and	556	770
ime	770	775

CONTINUE ON SEPARATE SHEET IF NECESSARY)

GNED Wehling Well Works, Inc. DATE 2-5-75
Wendell E Wehling
WELL OW

COUNTY No. 24931 S.S.# 59921
(Over)
4-33N-9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
black dirt	0	3
blue clay	3	15
gray shale	15	85
brown limestone	85	385
Total Depth		385

Casing: 5" A-53 STEEL 15# from -1' to 90'

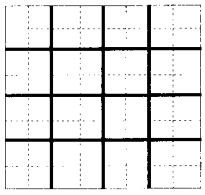
Grout: BENTONITE from 0 to 90.
Water from limestone at 85' to 385'.
Static level 120' below casing top which is 1' above GL
Pumping level 260' when pumping at 15 gpm for 1 hour
Additional location info: Lot #9, subdivision.

Address of well: 5150 N. Dresden

Location source: Location from permit

Permit Date: February 20, 1997 **Permit #:** 063-012

COMPANY Matherly, Hubert
FARM McCormick, James
DATE DRILLED April 7, 1997 **NO.**
ELEVATION 0 **COUNTY NO.** 23526
LOCATION NW NW NW
LATITUDE 41.359852 **LONGITUDE** - 88.266670
COUNTY Grundy **API** 120632352600 **12 - 33N - 8E**



	Thickness	Top	Bottom
rtial Sample Study by Anne M. Graese January 8. 1981			
IATERNARY SYSTEM			
leistocene Series			
Sand, moderate yellowish brown (10 YR 5/4), argillaceous, subrounded to subangular		5	10
DOVICIAN SYSTEM			
Maquoketa Group			
Brainard shale			
Shale, greenish gray (5G 6/1) to dark greenish gray (5 G 4/1), silty, dolomitic, weak to moderately tough		10	20
Shale, same; trace greenish gray (5 GY 4/1), dolomite, fine grained, silty, argillaceous, slightly dark gray (N3), speckled		20	65
Same, mostly weak and not as silty; dolomite, more calcareous		65	70
Shale (95%) similar to above, greenish gray (5 GY 6/1); limestone (5%), dark greenish gray (5 GY 4/1), very argillaceous, silty, silty very fine to fine grained		70	75
Limestone (70%), olive gray (5Y 4/1), slightly dark gray (N3), speckled, very fine to coarse grained, argillaceous to very argillaceous, crinoidal; shale (30%), olive gray (5Y 4/1), slightly dark gray (N3), speckled, argillaceous, calcareous		75	80
Same, as above but limestone is more fossiliferous (bryozoans, crinoids) than above		80	90

PANY Wehling Well Works Inc. 2130
N Des Plaines Dept. of Conservation
E DRILLED January 1975 COUNTY NO. 24931
HORITY Anne M. Graese
VATION 517'
TION 100' S line, 650' W line of SW
ITY WILL SS# 59921

4-33N-9E

	Thickness	Top	Bottom
Limestone (60%) same, as above; shale (40%) same, as above		90	95
Shale (80%), same; limestone (20%), same		95	100
Fort Atkinson Limestone			
Limestone, yellowish gray (5Y 8/1) to pinkish gray (5 YR 8/1), coarse grained, relatively pure, some dark gray (N3), speckled; some shale, similar to above (sample ground fine)		100	105
Limestone (60%) same, as above; shale (40%), greenish gray (5 GY 6/1), weak, silty, calcareous		105	110
Limestone, pinkish gray (5 YR 8/1) to yellowish gray (5Y 8/1), mottled slightly with greenish gray (5 GY 6/1), coarse grained, pure crinoidal		110	115
Limestone, yellowish gray (5 YR 8/1) same, as above, some light olive gray (5Y 6/1), which is argillaceous		115	120
Scales shale			
Limestone (70%), olive gray (5Y 4/1), very fine to fine grained, very argillaceous; shale (30%), olive gray (5Y 4/1), calcareous, moderately tough, some pyritic		120	130
Missing sample		130	135
Limestone same, as above		135	140
Shale (95%), olive gray (5 Y 4/1), calcareous, moderately tough to tough, some weak		140	160
Missing sample		160	165
Shale same, as above		165	200
Missing samples		200	210

Wehling Well Works Inc. Des Plains Dept of Cons.
WILL SS# 59921 4-33N-8E

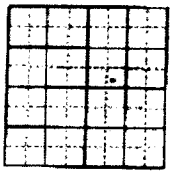
	Thickness	Top	Bottom
Galena Group			
Dolomite, pale yellowish brown (10 YR 6/2), very slightly dark gray (N3) speckled, fine to medium grained, calcareous, vesicular, some olive gray (5Y 4/1) partings		210	220

Wehling Well Works Inc. Des Plaines Dept.of Cons
WILL SS# 59921 4-33N-9E

ILLINOIS GEOLOGICAL SURVEY, URBANA

Permit #44234	Thickness	Top	Bottom
Drift, sand, gravel		0	10
Gray shale and sand		10	15
Sand		15	25
Shale		25	45
Shale and gray limestone		45	50
Shale		50	55
Shale and limestone		55	65
Limestone		65	70
Limestone and shale		70	75
Shale		75	80
Light gray limestone		80	110
Light gray limestone-Dolomite		110	115
Dark limestone		115	120
Dark limestone and shale		120	125
Dark limestone		125	145
Dark limestone and shale		145	160
Hard shale		160	170
Hard shale and little limestone		170	185
Hard shale		185	190
Hard shale and little limestone		190	200
Total Depth-Samples			260
Water from limestone 120 - 200'			
Casing: 6" Black 19 # 0 - 90'			
Size Hole below casing: 6"			
Hole caved in at 130'			
I.S. # 60364			
NO ENVELOPE (Continues on back of log.)			

ANY K & K Well Drilling
Ill. Dept. of Conservation NO.
DRILLED January 1976 COUNTY NO. 25594
ERTY Company
ATION 520' ETM - DRK & JDT
TION Ap. 2400' N. line, 1900' E. line, NE
TY WILL



9-33N-9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
SS #9935 (0'-38')	0	0
clay	0	4
gravel	4	12
shale	12	35
limestone & shale	35	60
limetone	60	105
limeston & shale	105	175
limestone	175	505
Total Depth		505

Casing: 5" A-53 15#/FT from 0' to 42'

Size hole below casing: 5"

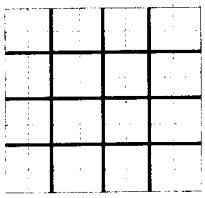
Water from limestone at 175' to 505'.
Static level 260' below casing top which is 1' above GL
Pumping level 340' when pumping at 12 gpm for 1 hour
Permanent pump installed at 360' on , with a capacity of 12 gpm

Driller's Log filed
Additional location info: Lot , Phalen Acres subdivision. Unit #74

Location source: Location from permit

Permit Date: July 14, 1977 **Permit #:** 63473

COMPANY Fykes, Charles N.
FARM Grate, Tony
DATE DRILLED July 19, 1977 **NO.** 1
ELEVATION 0 **COUNTY NO.** 27909
LOCATION SW NE SW
LATITUDE 41.365974 **LONGITUDE** - 88.243185
COUNTY Will **API** 121972790900 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

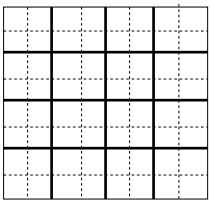
Water Well	Top	Bottom
clay	0	15
limestone	15	60
broken shale	60	75
hard shale	75	90
broken limestone	90	165
limestone	165	175
Total Depth		175

Water from limestone at 165' to 175'.

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Fykes Charles & Pump
FARM Kavdac James L
DATE DRILLED October 1, 1975 **NO.** 1
ELEVATION 0 **COUNTY NO.** 27922
LOCATION NW NW NW
LATITUDE 41.346815 **LONGITUDE -** 88.190166
COUNTY Will **API** 121972792200 **15 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

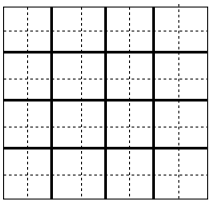
Water Well	Top	Bottom
gravel	0	3
limestone	3	60
shale	60	85
limestone	85	105
Total Depth		105

Water from limestone at 85' to 105'.

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Fykes Charles & Pump
FARM Lapaso Jim
DATE DRILLED July 1, 1978 **NO.** 1
ELEVATION 0 **COUNTY NO.** 27923
LOCATION SW SW NW
LATITUDE 41.341459 **LONGITUDE -** 88.190111
COUNTY **Will** **API 121972792300** **15 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

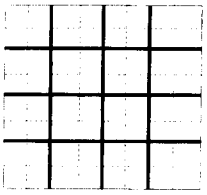
Water Well	Top	Bottom
clay	0	15
gravel	15	25
clay	25	30
gravel	30	45
limestone	45	50
shale	50	90
broken formation	90	95
limestone	95	420
Total Depth		420

Water from limestone at 95' to 420'.

Driller's Log filed

Permit Date: **Permit #:** 0

COMPANY Fykes Charles & Pump
FARM Tri-County Well
DATE DRILLED November 1, 1980 **NO.** 1
ELEVATION 0 **COUNTY NO.** 28238
LOCATION SW SW SE
LATITUDE 41.348084 **LONGITUDE** - 88.218736
COUNTY Will **API** 121972823800 **8 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	10
sand & gravel	10	20
clay	20	40
limestone	40	100
shale rock	100	160
limestone	160	380
Total Depth		380

Casing: 5" BLACK STEEL from 0' to 42'

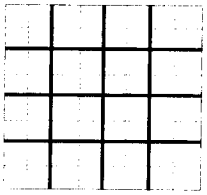
Grout: CUTTINGS from 0 to 42.
Size hole below casing: 5"

Water from limestone at 0' to 0'.
Static level 240' below casing top which is 1' above GL
Pumping level 340' when pumping at 10 gpm for 4 hours
Permanent pump installed at 340' on , with a capacity of 10 gpm

Location source: Field verified

Permit Date: March 22, 1985 **Permit #:** 116918

COMPANY Rob, Ronald Gene
FARM Roak, Lorraine
DATE DRILLED March 23, 1985 **NO.**
ELEVATION 505GL **COUNTY NO.** 28332
LOCATION 2400'N line, 1150'E line of section
LATITUDE 41.355219 **LONGITUDE** - 88.233911
COUNTY Will **API 121972833200** **7 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	30
shale	30	70
shale & limestone	70	110
limestone	110	150
shale	150	210
limestone	210	305
Total Depth		305

Casing: 5" A-53 15 LBS. from 0' to 74'

Size hole below casing: 5"

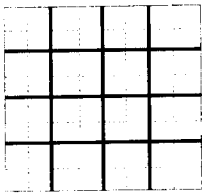
Water from limestone at 210' to 305'.
Static level 175' below casing top which is 1' above GL
Pumping level 225' when pumping at 12 gpm for 1 hour

Permanent pump installed at 200' on May 1, 1985, with a capacity of 12 gpm

Location source: Field verified

Permit Date: May 1, 1985 **Permit #:** 117555

COMPANY Fykes, Charles N.
FARM Hibler, Bob
DATE DRILLED May 1, 1985 **NO.** 1
ELEVATION 505GL **COUNTY NO.** 28375
LOCATION 1840'N line, 1900'W line of section
LATITUDE 41.356939 **LONGITUDE** - 88.222885
COUNTY Will **API** 121972837500 **8 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil (sandy)	0	6
gravel	6	12
boulders	12	14
sand & gravel	14	35
clay (gray)	35	40
stone (dark gray)	40	85
limestone	85	213
Total Depth		213

Casing: 5" GALV. STEEL 15 LB/FT from 0' to 45'

Grout: PDLD CL & DRL from 0 to 45.
Size hole below casing: 5"

Water from limestone at 0' to 213'.
Static level 96' below casing top which is 1' above GL
Pumping level 213' when pumping at 5 gpm for 1 hour

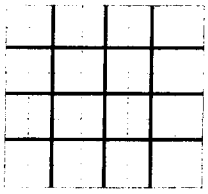
Permanent pump installed at 200' on May 28, 1985, with a capacity of 10 gpm

Additional location info: Lot #7, Readman Farm subdivision.

Location source: Field verified

Permit Date: May 24, 1985 **Permit #:** 118022

COMPANY Dreher, Theodore Albert
FARM Patterson, Robert E.
DATE DRILLED May 28, 1985 **NO.**
ELEVATION 520GL **COUNTY NO.** 28396
LOCATION 1300'N line, 800'W line of section
LATITUDE 41.329879 **LONGITUDE** - 88.188108
COUNTY Will **API** 121972839600 **22 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
surface	0	2
clay	2	18
sand & gravel	18	20
shale	20	92
limestone	92	130
dark shale	130	565
Total Depth		565

Casing: 5" BLACK STEEL from 0' to 92'

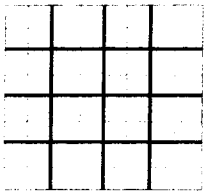
Grout: CUTTINGS from 0 to 92.
Size hole below casing: 5"

Water from dark shale at 0' to 0'.
Static level 320' below casing top which is 1' above GL
Pumping level 360' when pumping at 10 gpm for 4 hours
Permanent pump installed at 360' on , with a capacity of 10 gpm

Location source: Field verified

Permit Date: May 13, 1986 **Permit #:** 123720

COMPANY Rob, Ronald Gene
FARM Spencer, Florence
DATE DRILLED May 13, 1986 **NO.**
ELEVATION 520GL **COUNTY NO.** 28844
LOCATION 2550'N line, 1200'W line of section
LATITUDE 41.326466 **LONGITUDE** - 88.186407
COUNTY Will **API** 121972884400 **22 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	5
boulders, sand & gvl	5	30
shale	30	85
sand & limestone	85	170
shale	170	210
limestone	210	590
St. Peters sand	590	620
Total Depth		620

Casing: 5" A-53 15 LBS. from 0' to 63'

Size hole below casing: 5"

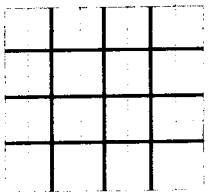
Water from St. Peters sand at 590' to 620'.
Static level 285' below casing top which is 1' above GL
Pumping level 320' when pumping at 12 gpm for 1 hour
Permanent pump installed at 300' on August 22, 1985, with a capacity of 12 gpm

Additional location info: Lot , subdivision. Redman-River lots

Location source: Field verified

Permit Date: July 3, 1985 **Permit #:** 118812

COMPANY Fykes, Charles N.
FARM DeBretto, Joe
DATE DRILLED August 10, 1985 **NO.** 1
ELEVATION 525GL **COUNTY NO.** 28445
LOCATION 2200'N line, 950'W line of section
LATITUDE 41.327411 **LONGITUDE** - 88.187387
COUNTY Will **API** 121972844500 **22 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	4
clay & gravel	4	9
sandy clay	9	13
hardpan	13	31
limestone (wh & gry)	31	52
shale	52	130
limestone tan & wh	130	180
Total Depth		180

Casing: 5" GALV. STEEL 15 LB/FT from 0' to 32'

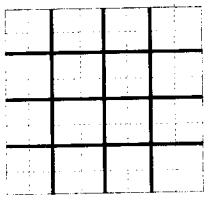
Grout: PDLD CL & DRL from 0 to 32.
Size hole below casing: 5"

Water from limestone at 0' to 180'.
Static level 25' below casing top which is 1' above GL
Pumping level 45' when pumping at 12 gpm for 1 hour
Permanent pump installed at 100' on September 25, 1986, with a capacity of 10 gpm

Location source: Field verified

Permit Date: September 12, 1986 **Permit #:** 126798

COMPANY Dreher, Theodore Albert
FARM Buck, Joan
DATE DRILLED September 22, 1986 **NO.**
ELEVATION 532GL **COUNTY NO.** 29116
LOCATION 800'S line, 2850'W line of section
LATITUDE 41.349671 **LONGITUDE** - 88.200267
COUNTY Will **API** 121972911600



9 - 33N - 9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	3
gravel & sand	3	19
limestone	19	70
shale	70	275
limestone	275	600
St. Peter sand	600	645
Total Depth		645

Casing: 5" A-53 15# from 0' to 275'

Size hole below casing: 5"

Water from St. Peter sandstone at 600' to 645'.
Static level 220' below casing top which is 1' above GL
Pumping level 320' when pumping at 20 gpm for 1 hour

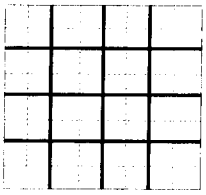
Permanent pump installed at 336' on June 9, 1988, with a capacity of 17 gpm

Address of well: Cottage Road
Wilmington, IL

Location source: Location from permit

Permit Date: April 15, 1988 **Permit #:** 001207

COMPANY Fykes, Charles N.
FARM Sievers, Douglas Const.
DATE DRILLED April 25, 1988 **NO.** 1
ELEVATION 0 **COUNTY NO.** 30362
LOCATION SW SW NW
LATITUDE 41.355617 **LONGITUDE** - 88.209801
COUNTY Will **API** 121973036200 **9 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	4
sand & gravel	4	53
limestone	53	118
shale	118	195
stone	195	340
Total Depth		340

Casing: 5" BLACK STEEL 15 LB/FT from 0' to 54'

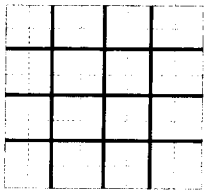
Grout: C/S & DRILLINGS from 0 to 54.
Size hole below casing: 5"

Water from limestone at 310' to 340'.
Static level 234' below casing top which is 1' above GL
Pumping level 280' when pumping at 10 gpm for 1 hour
Permanent pump installed at 300' on December 12, 1981, with a capacity of 1 gpm

Location source: Field verified

Permit Date: November 30, 1981 **Permit #:** 102282

COMPANY Dreher, Theodore Albert
FARM Fornelli, Colo
DATE DRILLED December 10, 1981 **NO.**
ELEVATION 530GL **COUNTY NO.** 31229
LOCATION 50'S line, 1000'E line of section
LATITUDE 41.347330 **LONGITUDE** - 88.214224
COUNTY Will **API** 121973122900 **8 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
top soil	0	2
clay	2	18
clay & gravel	18	57
brown limestone	57	110
Total Depth		110

Casing: 5" A-53 15 LBS from 0' to 57'

Size hole below casing: 5"

Water from limestone at 57' to 110'.
Static level 30' below casing top which is 1' above GL
Pumping level 40' when pumping at 8 gpm for 1 hour

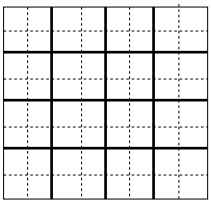
Permanent pump installed at 40' on June 24, 1981, with a capacity of 10 gpm

Address of well: Kankakee River & Lorenzo Road

Location source: Field verified

Permit Date: June 15, 1981 **Permit #:** 100124

COMPANY Fykes, Charles N.
FARM Jadron, Tony
DATE DRILLED June 22, 1981 **NO.** 1
ELEVATION 525GL **COUNTY NO.** 31230
LOCATION 1300'S line, 1200'W line of section
LATITUDE 41.337067 **LONGITUDE -** 88.186928
COUNTY Will **API 121973123000** **15 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	6
shale	6	51
limestone	51	95
hard shale	95	170
limestone & shale	170	300
Total Depth		300

Casing: 5" A-53 15# from 0' to 53'

Grout: CEMENT from 0 to 53.
Size hole below casing: 5"

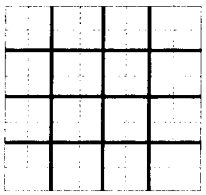
Water from limestone at 51' to 300'.
Static level 205' below casing top which is 1' above GL
Pumping level 280' when pumping at 0 gpm for 1 hour
Permanent pump installed at 280' on September 19, 1992, with a capacity of 12 gpm

Address of well: 26030 Willow Ln.
Wilmington, IL

Location source: Location from permit

Permit Date: September 16, 1992 **Permit #:**

COMPANY Fykes, Charles N.
FARM Stevens, Rick
DATE DRILLED September 17, 1992 **NO.** 2
ELEVATION 0 **COUNTY NO.** 34472
LOCATION NW NE SW
LATITUDE 41.367803 **LONGITUDE** - 88.243489
COUNTY Will **API** 121973447200 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	3
clay	3	10
blue shale	10	24
gray clay	24	53
solorium	53	74
Total Depth		74

Casing: 5" PVC SDR 21 from 0' to 172'

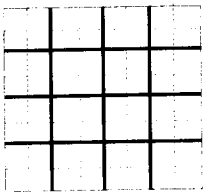
Permanent pump installed at 320' on August 9, 1992, with a capacity of 10 gpm

Address of well: 26062 Muskie Lane
Wilmington, IL

Location source: Location from permit

Permit Date: June 26, 1992 **Permit #:**

COMPANY Wills, Elmer
FARM Gualdoni, Catherine&Josephine
DATE DRILLED August 7, 1992 **NO.**
ELEVATION 0 **COUNTY NO.** 34899
LOCATION SW
LATITUDE 41.365078 **LONGITUDE** - 88.244520
COUNTY Will **API** 121973489900 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	20
gravel	20	30
limestone with shale streaks	30	45
limestone	45	160
hard black shale	160	250
brown limestone	250	520
sandstone	520	545
Total Depth		545

Casing: 5" A-53 15# from 0' to 45'

Grout: CEMENT from -5 to 45.
Size hole below casing: 5"

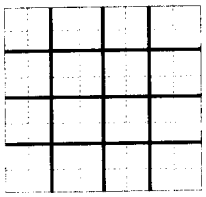
Water from sandstone at 520' to 545'.
Static level 100' below casing top which is 1' above GL
Pumping level 260' when pumping at 0 gpm for 1 hour
Permanent pump installed at 320' on February 3, 1994, with a capacity of 12 gpm

Address of well: 25618 Cottage Dr.
Wilmington, IL

Location source: Location from permit

Permit Date: September 22, 1993 **Permit #:**

COMPANY Fykes, Charles N.
FARM Grskovic, Gary & Kim
DATE DRILLED February 3, 1994 **NO.**
ELEVATION 0 **COUNTY NO.** 35954
LOCATION SW SE NE
LATITUDE 41.355342 **LONGITUDE** - 88.233313
COUNTY Will **API** 121973595400 **7 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
brown clay	0	20
shale	20	40
brown & gray limestone	40	80
hard black shale	80	100
Total Depth		100

Casing: 5" A53 15# from 0' to 40'

Grout: CLAY SLRY/CTGS from 0 to 40.
Size hole below casing: 5"

Water from limestone at 40' to 100'.
Static level 5' below casing top which is 1' above GL
Pumping level 60' when pumping at 0 gpm for 1 hour

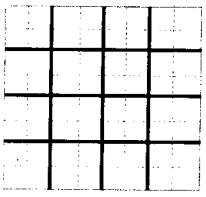
Additional location info: Lot #45, Phelan Acres subdivision.

Address of well: 28308 Fir Lane
Wilmington, IL

Location source: Location from permit

Permit Date: November 16, 1994 **Permit #:**

COMPANY Fykes, Charles N.
FARM House of Radiators
DATE DRILLED February 2, 1995 **NO.**
ELEVATION 0 **COUNTY NO.** 36613
LOCATION NW NE SW
LATITUDE 41.367803 **LONGITUDE** - 88.243489
COUNTY Will **API** 121973661300 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	20
soft gray shale	20	88
brown limestone	88	115
hard black shale	115	195
brown limestone	195	445
Total Depth		445

Casing: 5" A-53 15# from 0' to 88'

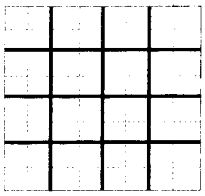
Grout: BENTONITE from 0 to 88.
Size hole below casing: 5"

Water from limestone at 88' to 445'.
Static level 120' below casing top which is 1' above GL
Pumping level 360' when pumping at 0 gpm for 1 hour
Permanent pump installed at 360' on April 24, 1995, with a capacity of 12 gpm

Location source: Location from permit

Permit Date: April 11, 1995 **Permit #:**

COMPANY Matherly, Hubert
FARM Novak, Charles
DATE DRILLED April 21, 1995 **NO.**
ELEVATION 0 **COUNTY NO.** 36689
LOCATION SE SE NW
LATITUDE 41.355150 **LONGITUDE** - 88.240489
COUNTY Will **API** 121973668900 **7 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
brown clay	0	10
brown sandstone & shale	10	63
brownish red sandstone	63	110
medium hard gray shale	110	165
Total Depth		165

Casing: 5" A-53 15# from 0' to 63'

Grout: BENTONITE from 0 to 63.
Size hole below casing: 5"

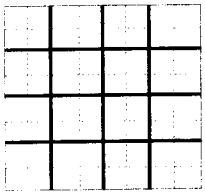
Water from shale at 63' to 165'.
Static level 20' below casing top which is 1' above GL
Pumping level 80' when pumping at 0 gpm for 1 hour
Permanent pump installed at 100' on June 30, 1995, with a capacity of 12 gpm

Additional location info: Lot #6, Phelans Acres subdivision.

Location source: Location from permit

Permit Date: June 28, 1995 **Permit #:**

COMPANY Fykes, Charles N.
FARM Bradley, Pat
DATE DRILLED June 28, 1995 **NO.**
ELEVATION 0 **COUNTY NO.** 36795
LOCATION NW NE SW
LATITUDE 41.367803 **LONGITUDE** - 88.243489
COUNTY Will **API** 121973679500 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	2
clay	2	6
red clay	6	7
gray clay	7	11
sand	11	16
gray clay	16	31
soft clay & shale	31	33
gray clay	33	40
shale	40	49
solorium	49	70
white limestone	70	98
Total Depth		98

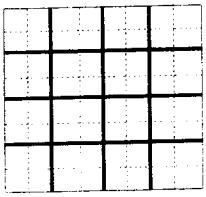
Casing: 6" SDR 21 from 0' to 49'

Grout: BENTONITE CTGS from 0 to 49.
Size hole below casing: 6"

Static level 14' below casing top which is 1' above GL
Pumping level 68' when pumping at 0 gpm for 1 hour
Permanent pump installed at 80' on July 20, 1995, with a capacity of 7 gpm

Location source: Location from permit

Permit Date: July 13, 1995 **Permit #:**



COMPANY Wills, Elmer D.
FARM Tadej, Robert E.
DATE DRILLED July 15, 1995 **NO.**
ELEVATION 0 **COUNTY NO.** 36875
LOCATION W2 NE
LATITUDE 41.343282 **LONGITUDE** - 88.236372
COUNTY Will **API** 121973687500 **18 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sandy soil	0	5
sand	5	14
shale	14	43
shale & lime	43	61
sandy shale	61	75
lime & shale	75	114
white lime	114	132
lime & shale	132	146
gummy shale	146	156
Total Depth		156

Casing: 6" STEEL SCH 40 ASA-53 from -2' to 48'
5" PLASTIC SCH 40 LINER from 38' to 116'
" SLOTTED from 116' to 156'

Screen: 40' of 5" diameter slot
Size hole below casing: 5.87"

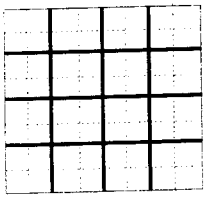
Water from limestone at 61' to 143'.
Static level 90' below casing top which is 2' above GL
Pumping level 130' when pumping at 0 gpm for 1 hour
Permanent pump installed at 150' on June 8, 1996, with a capacity of 8 gpm

Address of well: 30478 W. Frontage

Location source: Location from permit

Permit Date: June 2, 1995 **Permit #:**

COMPANY Huskisson, Robert
FARM Hamilton, Ron #2
DATE DRILLED May 19, 1996 **NO.**
ELEVATION 0 **COUNTY NO.** 37132
LOCATION NE SE
LATITUDE 41.324194 **LONGITUDE** - 88.193031
COUNTY Will **API** 121973713200 **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	4
yellow clay	4	6
sand & gravel	6	7
gray clay	7	11
blue clay	11	18
blue shale	18	58
Silurian	58	100
Cahokia	100	176
Trenton lime	176	420
Total Depth		420

Casing: 6" SDR 21 from 0' to 55'

Grout: BENSEAL from 0 to 55.
Size hole below casing: 5"

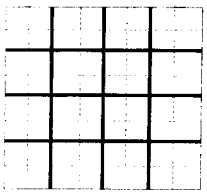
Water from rock at 96' to 420'.
Static level 206' below casing top which is 1' above GL
Pumping level 255' when pumping at 10 gpm for 1 hour
Permanent pump installed at 300' on May 24, 1996, with a capacity of 10 gpm

Address of well: 26056 Marlin Ct.
Wilmington, IL

Location source: Location from permit

Permit Date: August 31, 1995 **Permit #:**

COMPANY Wills, Elmer
FARM Rittoff, Leonard
DATE DRILLED May 20, 1996 **NO.**
ELEVATION 0 **COUNTY NO.** 37160
LOCATION SE SW
LATITUDE 41.363370 **LONGITUDE** - 88.242051
COUNTY Will **API** 121973716000 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	13
gravel	13	14
dolomite	14	33
blue rock	33	41
shale	41	120
Silurian	120	172
Maquoketa shale	172	180
Total Depth		180

Casing: 6" SDR 21 from 0' to 40'
5" LINER from 40' to 180'

Grout: BENSEAL from 0 to 40.
Size hole below casing: 6"

Water from blue rock & Silurian at 40' to 180'.
Static level 12' below casing top which is 1' above GL
Pumping level 140' when pumping at 0 gpm for 4 hours
Permanent pump installed at 140' on June 28, 1997, with a capacity of 10 gpm

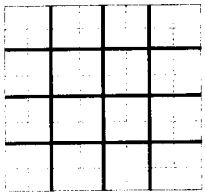
Additional location info: Lot #12, Kinney subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: June 16, 1997 **Permit #:**

COMPANY Wills, Elmer
FARM Reiter, Richard
DATE DRILLED June 26, 1997 **NO.**
ELEVATION 0 **COUNTY NO.** 37497
LOCATION NW SE NE
LATITUDE 41.357425 **LONGITUDE** - 88.214612
COUNTY Will **API** 121973749700 **8 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay - rocks	0	5
clay	5	15
sand	15	25
clay	25	60
shale - limestone streaks	60	70
limestone	70	100
shale	100	178
limestone	178	545
sandstone	545	580
Total Depth		580

Casing: 5" PVC SDR 21 #200 from 1' to 250'
5" PVC SDR 17 #250 from 250' to 545'

Grout: BENTONITE from 0 to 545.
Size hole below casing: 4.75"

Water from sandstone at 545' to 580'.
Static level 30' below casing top which is 1' above GL
Pumping level 340' when pumping at 0 gpm for 2 hours
Permanent pump installed at 360' on September 13, 1997, with a capacity of 10 gpm

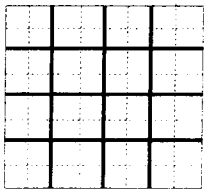
Additional location info: Lot , subdivision.

Address of well: 25255 W. Lorenzo Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: June 27, 1997 **Permit #:** 197-97-

COMPANY Strange, Robert E.
FARM Giertuga, Jim
DATE DRILLED September 8, 1997 **NO.**
ELEVATION 0 **COUNTY NO.** 37529
LOCATION NE NE NW
LATITUDE 41.346230 **LONGITUDE** - 88.220988
COUNTY Will **API** 121973752900 **17 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	1
brown clay	1	3
green clay	3	10
blue clay	10	26
gray clay	26	60
Silurian	60	100
Maquoketa shale	100	180
Trenton	180	340
Total Depth		340

Casing: 6" SDR 21 from 0' to 63'

Grout: BENSEAL from 0 to 63.
Size hole below casing: 6"

Water from Silurian at 63' to 340'.
Static level 200' below casing top which is 2' above GL
Pumping level 300' when pumping at 0 gpm for 1 hour
Permanent pump installed at 300' on February 4, 1998, with a capacity of 10 gpm

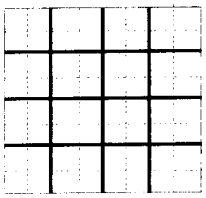
Additional location info: Lot , Phelans Acres Condos subdivision.
Tax #17-06-303-001-1057

Address of well: Bluefin Lane
Wilmington, IL

Location source: Location from permit

Permit Date: July 14, 1997 **Permit #:**

COMPANY Wills, William D.
FARM Cambruzzi, Joyce & Ra
DATE DRILLED February 3, 1998 **NO.** 1
ELEVATION 0 **COUNTY NO.** 37939
LOCATION SW SW SE
LATITUDE 41.362591 **LONGITUDE** - 88.238471
COUNTY Will **API** 121973793900 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	2
sand gravel	2	18
clay	18	46
shale	46	206
rock	206	580
sandstone	580	600
Total Depth		600

Casing: 6" BLACK STEEL from -1' to 84'
4.5" PVC LINER from 40' to 209'

Grout: BENTONITE from 0 to 84.
Size hole below casing: 4.75"

Water from sandstone at 580' to 600'.
Static level 200' below casing top which is 1' above GL
Pumping level 399' when pumping at 0 gpm for 4 hours
Permanent pump installed at 399' on December 1, 1998, with a capacity of 12 gpm

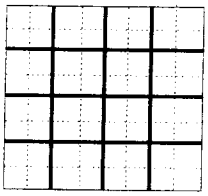
Additional location info: Lot , subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: November 18, 1998 **Permit #:** 197-98-

COMPANY Walters, Larry
FARM Kavanaugh, Judy
DATE DRILLED November 23, 1998 **NO.**
ELEVATION 0 **COUNTY NO.** 38148
LOCATION NE NW SW
LATITUDE 41.324783 **LONGITUDE** - 88.206277
COUNTY Will **API 121973814800** **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
black dirt	0	2
dirt with rocks	2	5
gravel	5	12
clay	12	25
sand & gravel	25	40
clay	40	55
shale with limestone streaks	55	72
limestone	72	120
shale	120	196
limestone	196	565
sandstone	565	600
Total Depth		600

Casing: 5" PVC SDR 21 200 PSI from -1' to 159'
5" PVC SDR 17 250 PSI from 159' to 199'

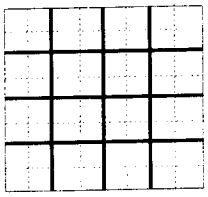
Grout: BENTONITE from 0 to 199.
Water from sandstone at 565' to 600'.
Static level 200' below casing top which is 1' above GL
Pumping level 300' when pumping at 25 gpm for 2 hours
Additional location info: Lot , subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: October 27, 1998 **Permit #:** 197-98-

COMPANY Strange, Robert E.
FARM Onderisin, Alan
DATE DRILLED November 7, 1998 **NO.**
ELEVATION 0 **COUNTY NO.** 38149
LOCATION SW NW SW
LATITUDE 41.337346 **LONGITUDE** - 88.209219
COUNTY Will **API** 121973814900 **16 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	8
shale	8	60
limestone	60	95
shale, limestone	95	175
limestone	175	218
broken rock cavern	218	220
limestone	220	300
Total Depth		300

Casing: 5" PVC SDR 21 200 PSI from -1' to 63'

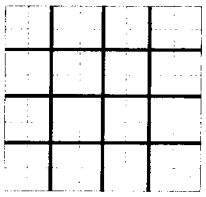
Grout: BENTONITE from 0 to 63.
Water from limestone at 63' to 300'.
Static level 140' below casing top which is 1' above GL
Pumping level 0' when pumping at 20 gpm for 2 hours
Additional location info: Lot 128, Phelan Acres subdivision.

Address of well: 26040 Muskie Lane
Wilmington, IL

Location source: Location from permit

Permit Date: August 31, 1998 **Permit #:** 197-98-

COMPANY Strange, Robert E.
FARM Kapinus, Don
DATE DRILLED August 21, 1998 **NO.**
ELEVATION 0 **COUNTY NO.** 38213
LOCATION NE SE SW
LATITUDE 41.364307 **LONGITUDE** - 88.240921
COUNTY Will **API** 121973821300 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	16
shale	16	33
soft limestone	33	110
Total Depth		110

Casing: 5" STEEL from 0' to 43'

Grout: BENTONITE from 0 to 110.
Water from limestone at 10' to 110'.
Static level 10' below casing top which is 1' above GL
Pumping level 80' when pumping at 0 gpm for 2 hours
Permanent pump installed at 80' on April 8, 1999, with a capacity of 12 gpm

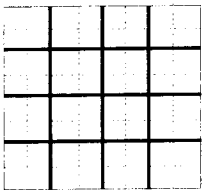
Additional location info: Lot 15, J.O'Brien Riverview subdivision. Tax#17-07-201-001

Address of well: 25960 N Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: March 29, 1999 **Permit #:** 197-99-

COMPANY Bisping, Calvin
FARM Hoffman, William J.
DATE DRILLED April 7, 1999 **NO.**
ELEVATION 0 **COUNTY NO.** 38376
LOCATION NW SW NE
LATITUDE 41.357064 **LONGITUDE** - 88.238189
COUNTY Will **API** 121973837600 **7 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	1
sand	1	12
clay	12	39
shale	39	41
coal	41	42
fire clay	42	45
shale	45	77
sandrock	79	132
Maquoketa shale	132	156
shale & limestone	156	207
Trenton	207	574
St. Peter	574	600
Total Depth		600

Casing: 5" SDR 21 from 0' to 209'

Grout: BENSEAL from 0 to 209.
Size hole below casing: 5"

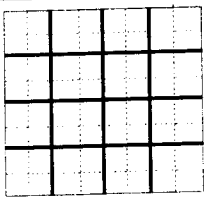
Water from St. Peter at 210' to 600'.
Static level 210' below casing top which is 1' above GL
Pumping level 340' when pumping at 0 gpm for 3 hours
Permanent pump installed at 340' on November 1, 1999, with a capacity of 10 gpm

Additional location info: Lot parcel 1, subdivision.

Address of well: Kavanaugh Rd.
Wilmington, IL

Permit Date: June 28, 1999 **Permit #:**

COMPANY Wills, William D.
FARM Dolasin, Ray
DATE DRILLED November 1, 1999 **NO.** 6
ELEVATION 0 **COUNTY NO.** 38443
LOCATION SW SW SW
LATITUDE 41.319312 **LONGITUDE** - 88.208356
COUNTY Will **API** 121973844300 **21 - 33N - 9E**



Location source: Location from permit

Wills, William D. Dolasin, Ray 6

COUNTY Will **API 121973844300** **21 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	60
sand & gravel	60	80
limestone	80	120
shale	120	175
limestone	175	520
Total Depth		520

Casing: 4" PLASTIC PVC SDR 40 from 70' to 220'

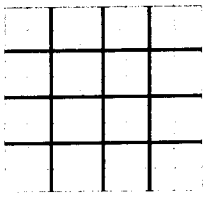
Grout: BENTONITE from 0 to 80.
Water from limestone at 500' to 520'.
Static level 240' below casing top which is 2' above GL
Pumping level 280' when pumping at 12 gpm for 2 hours
Additional location info: Lot 4, subdivision.

Address of well: 3100 S. Kavanaugh
Wilmington, IL

Location source: Location from permit

Permit Date: October 22, 1999 **Permit #:**

COMPANY Edward Hall - Web Well & Pump
FARM Mathy, Michael
DATE DRILLED October 23, 1999 **NO.** 1
ELEVATION 0 **COUNTY NO.** 38718
LOCATION NW SW SW
LATITUDE 41.321114 **LONGITUDE** - 88.208461
COUNTY Will **API** 121973871800 **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	20
clay mixed w/gravel	20	37
green shale	37	77
brown limestone	77	125
black shale	125	205
brown limestone	205	580
St. Peter	580	625
Total Depth		625

Casing: 6" A53 STEEL from -1' to 80'
4.50" CERTA LOK from 10' to 270'

Grout: BENTONITE from 5 to 80.
Water from St. Peter at 580' to 625'.
Static level 120' below casing top which is 1' above GL
Pumping level 380' when pumping at 25 gpm for 1 hour
Permanent pump installed at 462' on May 22, 2000, with a capacity of 12 gpm

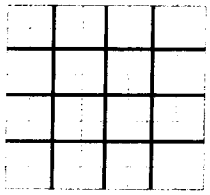
Additional location info: Lot 21, subdivision.

Address of well: Kavanaugh Road
Wilmington, IL

Location source: Location from permit

Permit Date: November 22, 1999 **Permit #:**

COMPANY Fykes, Charles N.
FARM Nasadowski, Joe
DATE DRILLED February 2, 2000 **NO.**
ELEVATION 0 **COUNTY NO.** 38785
LOCATION NW NW SW
LATITUDE 41.324724 **LONGITUDE** - 88.208674
COUNTY Will **API** 121973878500 **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	6
shale	6	37
sandstone	37	47
shale	47	80
sandstone	80	125
black shale	125	210
brown limestone	210	580
St. Peter sandstone	580	605
Total Depth		605

Casing: 6" A53 STEEL from -1' to 41'
4.50" CERTA LOK from 15' to 295'

Grout: BENTONITE from 5 to 41.
Water from St. Peter sandstone at 580' to 605'.
Static level 200' below casing top which is 1' above GL
Pumping level 320' when pumping at 25 gpm for 1 hour
Permanent pump installed at 462' on May 18, 2000, with a capacity of 8 gpm

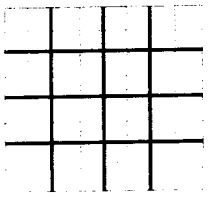
Additional location info: Lot , subdivision.

Address of well: Redman Lane
Wilmington, IL

Location source: Location from permit

Permit Date: May 9, 2000 **Permit #:**

COMPANY Fykes, Charles N.
FARM Hinz, Joyce
DATE DRILLED May 11, 2000 **NO.**
ELEVATION 0 **COUNTY NO.** 38910
LOCATION NE NW NW
LATITUDE 41.332558 **LONGITUDE** - 88.187472
COUNTY Will **API** 121973891000



22 - 33N - 9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	1
sand & gravel	1	14
clay	14	30
shale	30	63
limestone	63	126
shale	126	195
limestone	195	312
Total Depth		312

Casing: 4" PVC from 10' to 207'

Grout: MOUNDED BENT from 0 to 63.
Water from limestone at 220' to 0'.
Static level 180' below casing top which is 1' above GL
Pumping level 220' when pumping at 12 gpm for 2 hours
Permanent pump installed at 285' on August 29, 2000, with a capacity of 12 gpm

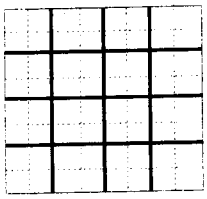
Additional location info: Lot 12, subdivision.

Address of well: 29709 S. Cooper Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: July 28, 2000 **Permit #:**

COMPANY Edward Hall - Web Well & Pump
FARM Williams, Ronald
DATE DRILLED August 28, 2000 **NO.** 1
ELEVATION 0 **COUNTY NO.** 38915
LOCATION NW SW NW
LATITUDE 41.342542 **LONGITUDE** - 88.227914
COUNTY Will **API** 121973891500 **17 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	18
shale	18	53
gray sandstone	53	65
shale	65	110
brown sandstone	110	130
shale	130	200
brown limestone	200	575
St. Peter	575	605
Total Depth		605

Casing: 6" A53 STEEL from -1' to 55'
4.50" CERTALOK from 10' to 250'

Grout: BENTONITE from 5 to 55.
Water from St. Peter at 250' to 605'.
Static level 360' below casing top which is 1' above GL
Pumping level 400' when pumping at 25 gpm for 1 hour
Permanent pump installed at 400' on June 30, 2000, with a capacity of 20 gpm

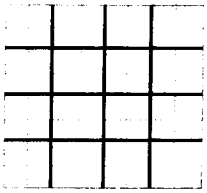
Additional location info: Lot , subdivision.

Address of well: 23624 S. River Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: May 24, 2000 **Permit #:**

COMPANY Matherly, Hubert
FARM Smrekar, Robert F.
DATE DRILLED May 31, 2000 **NO.**
ELEVATION 0 **COUNTY NO.** 38918
LOCATION NW NW SE
LATITUDE 41.325405 **LONGITUDE** - 88.179660
COUNTY Will **API 121973891800** **22 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand/gravel	0	15
clay	15	50
shale/rock streaks	50	80
limestone	80	130
shale	130	207
limestone	207	575
sandstone	575	600
Total Depth		600

Casing: 5" PVC SDR 21 #200 from 1' to 150'
5" PVC SDR 17 #250 from 150' to 210'

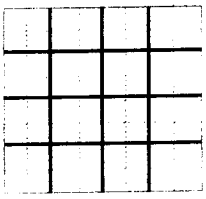
Grout: ENVIROPLUG from 0 to 210.
Water from sandstone at 575' to 600'.
Static level 200' below casing top which is 1' above GL
Pumping level 200' when pumping at 25 gpm for 2 hours
Additional location info: Lot 5, subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: November 27, 2000 **Permit #:**

COMPANY Sharpe, Franklin N.
FARM Landmichl, David J.
DATE DRILLED March 23, 2001 **NO.**
ELEVATION 0 **COUNTY NO.** 39297
LOCATION SW NW SW
LATITUDE 41.322919 **LONGITUDE** - 88.208569
COUNTY Will **API** 121973929700 **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil - sand	0	2
clay	2	50
limestone	50	200
Total Depth		200

Casing: 6" STEEL from 2' to 53'

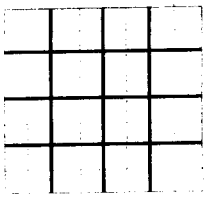
Grout: BENTONITE from 0 to 53.
Water from dry hole at 0' to 0'.
Additional location info: Lot 28, subdivision.

Address of well: 30631 S. Redman Lane
Wilmington, IL

Location source: Location from permit

Permit Date: June 15, 2001 **Permit #:**

COMPANY Edward Hall - Web Well & Pump
FARM O'Conner, Louise
DATE DRILLED **NO.**
ELEVATION 0 **COUNTY NO.** 39433
LOCATION NW NW NW
LATITUDE 41.332511 **LONGITUDE** - 88.189971
COUNTY Will **API** 121973943300



22 - 33N - 9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	36
gravel	36	39
shale	39	60
limestone	60	105
shale	105	155
limestone	155	320
Total Depth		320

Casing: 5" PVC from 1' to 74'

Grout: BENTONITE from 5 to 70.
Water from limestone at 155' to 320'.
Static level 200' below casing top which is 1' above GL
Pumping level 300' when pumping at 13 gpm for 2 hours
Permanent pump installed at 300' on , with a capacity of 12 gpm

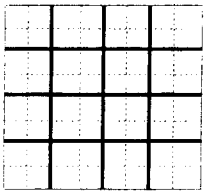
Additional location info: Lot , subdivision.

Address of well: 29761 S. Cooper Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: December 20, 2001 **Permit #:**

COMPANY Strange, Robert E.
FARM Overton, Jessie
DATE DRILLED December 23, 2001 **NO.** 1
ELEVATION 0 **COUNTY NO.** 40232
LOCATION SW SW NW
LATITUDE 41.340730 **LONGITUDE** - 88.227901
COUNTY Will **API** 121974023200 **17 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	15
soapstone	15	60
limestone	60	105
shale	105	170
limestone	170	210
shale	210	212
limestone	212	360
Total Depth		360

Casing: 5" PVC SDR 21 from -1' to 100'
4" PVC SDR 21 from 90' to 220'

Grout: GROUT from 0 to 100.
Water from limestone at 300' to 362'.
Static level 100' below casing top which is 1' above GL
Pumping level 260' when pumping at 20 gpm for 2 hours
Permanent pump installed at 260' on , with a capacity of 12 gpm

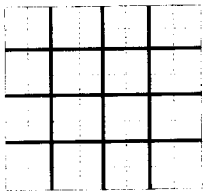
Additional location info: Lot 64, Phalen Acres subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: November 14, 2001 **Permit #:**

COMPANY Strange, Robert E.
FARM Kozlowski, Mike
DATE DRILLED December 11, 2001 **NO.** 1
ELEVATION 0 **COUNTY NO.** 40428
LOCATION NW NW SW
LATITUDE 41.367619 **LONGITUDE** - 88.247866
COUNTY Will **API** 121974042800 **6 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	18
clay & gravel	18	37
shale	37	75
limestone	75	130
black shale	130	205
limestone	205	580
St. Peter	580	645
Total Depth		645

Casing: 5" STEEL from -1' to 80'
4.50" CERTALOK from 15' to 275'

Grout: BENTONITE from 5 to 80.
Water from St. Peter at 585' to 645'.
Static level 220' below casing top which is 1' above GL
Pumping level 290' when pumping at 20 gpm for 1 hour
Permanent pump installed at 400' on June 14, 2002, with a capacity of 12 gpm

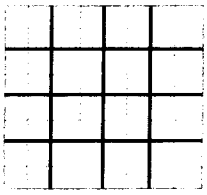
Additional location info: Lot , subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: June 7, 2002 **Permit #:**

COMPANY Matherly, Hubert
FARM McKeller, Emmett
DATE DRILLED June 12, 2002 **NO.**
ELEVATION 0 **COUNTY NO.** 40430
LOCATION NW NW SW
LATITUDE 41.324724 **LONGITUDE** - 88.208674
COUNTY Will **API** 121974043000 **21 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	1
yellow clay	1	7
sand	7	11
gray clay	11	21
gravel	21	25
blue clay	25	82
gray shale	82	109
Silurian	109	132
Maquoka shale	132	188
soft shale	188	200
Trenton lime	200	570
St. Peter	570	620
Total Depth		620

Casing: 5" PVC from 0' to 83'
4" PVC from 83' to 250'

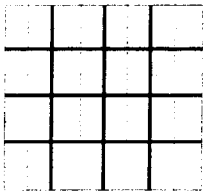
Grout: BENSEAL from 0 to 83.
Water from St. Peter at 570' to 620'.
Static level 290' below casing top which is 2' above GL
Pumping level 320' when pumping at 10 gpm for 2 hours
Permanent pump installed at 360' on August 7, 2003, with a capacity of 7 gpm

Additional location info: Lot 25, subdivision.

Address of well: same as above

Permit Date: July 2, 2003 **Permit #:**

COMPANY Wills, William D.
FARM Cartwright, Bob
DATE DRILLED August 1, 2003 **NO.**
ELEVATION 0 **COUNTY NO.** 40914
LOCATION SW NW NW
LATITUDE 41.330681 **LONGITUDE** - 88.189845
COUNTY Will **API** 121974091400 **22 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Location source: Location from permit

Wills, William D.

Cartwright, Bob

COUNTY Will **API 121974091400** **22 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	3
black dirt	3	10
sandy gray clay	10	30
soft shale	30	40
white rock	40	193
hard gray shale	193	275
limestone	275	520
Total Depth		520

Casing: 5" PVC from 0' to 43'

Grout: ENVIROPLUG from 0 to 43.
Water from rock at 440' to 520'.
Static level 200' below casing top which is 1' above GL
Pumping level 300' when pumping at 20 gpm for 1 hour
Permanent pump installed at 360' on September 16, 2003, with a capacity of 12 gpm

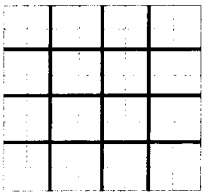
Additional location info: Lot 7, Bardwell Place subdivision.

Address of well: 25716 Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: July 3, 2003 **Permit #:**

COMPANY Stinnett, David
FARM Ferguson, William
DATE DRILLED September 12, 2003 **NO.**
ELEVATION 0 **COUNTY NO.** 40917
LOCATION SE SE NE
LATITUDE 41.355405 **LONGITUDE** - 88.230918
COUNTY Will **API** 121974091700 **7 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
soil	0	1
gravel	1	3
yellow clay	3	13
sand & gravel	13	18
red clay	18	26
gray clay	26	40
shale	40	81
Silurian	81	132
Maquoketa shale	132	205
Trenton	205	320
Total Depth		320

Casing: 4.5" PVC SDR 17 from 160' to 240'

Grout: BENSEAL from 0 to 55.
Water from limestone at 205' to 320'.
Static level 250' below casing top which is 2' above GL
Pumping level 265' when pumping at 10 gpm for 2 hours
Permanent pump installed at 280' on April 23, 2004, with a capacity of 7 gpm

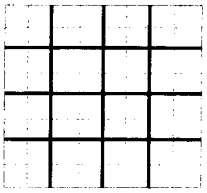
Additional location info: Lot , subdivision.

Address of well: same as above

Location source: Location from permit

Permit Date: March 5, 2004 **Permit #:**

COMPANY Wills, William D.
FARM Vedder, Charles
DATE DRILLED March 17, 2004 **NO.**
ELEVATION 0 **COUNTY NO.** 41189
LOCATION SE SW SW
LATITUDE 41.348026 **LONGITUDE** - 88.225701
COUNTY Will **API** 121974118900 **8 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
sand	0	35
limestone	35	80
shale	80	110
limestone	110	425
Total Depth		425

Casing: 6" STEEL from -1' to 40'
4.50" PVC from 20' to 160'

Grout: BENTONITE from 0 to 40.
Water from limestone at 160' to 425'.
Static level 100' below casing top which is 1' above GL
Pumping level 240' when pumping at 20 gpm for 1 hour
Permanent pump installed at 300' on September 30, 2004, with a capacity of 12 gpm

Additional location info: Lot 1, O'Briens Riverview subdivision.

Address of well: 25806 Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: June 23, 2004 **Permit #:**

COMPANY Matherly, Hubert
FARM Ramuta, Matthew
DATE DRILLED July 28, 2004 **NO.** 1
ELEVATION 0 **COUNTY NO.** 41398
LOCATION SW SE NE
LATITUDE 41.355342 **LONGITUDE** - 88.233313
COUNTY Will **API** 121974139800 **7 - 33N - 9E**

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	10
limestone	10	160
shale	160	240
limestone	240	550
sandstone	550	600
Total Depth		600

Casing: 6" STEEL from -1' to 42'
4.50" PVC from 20' to 280'

Grout: BENTONITE from 5 to 42.
Water from sandstone at 550' to 600'.
Static level 120' below casing top which is 1' above GL
Pumping level 300' when pumping at 20 gpm for 1 hour
Permanent pump installed at 400' on June 3, 2004, with a capacity of 12 gpm

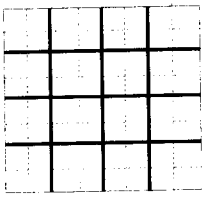
Additional location info: Lot 1, subdivision.

Address of well: 24760 Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: September 24, 2003 **Permit #:**

COMPANY Matherly, Hubert
FARM Sorg, Ron
DATE DRILLED April 20, 2004 **NO.** 1
ELEVATION 0 **COUNTY NO.** 41399
LOCATION NW NW SW
LATITUDE 41.353757 **LONGITUDE** - 88.209704
COUNTY Will **API** 121974139900 **9 - 33N - 9E**



ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
topsoil	0	2
clay & gravel, mixed	2	14
limestone	14	45
hard shale	45	125
rock	125	170
hard shale	170	180
Total Depth		180

Casing: 5" PVC SDR 21 from -1' to 126'

Grout: GROUT from 0 to 125.
Water from rock at 125' to 170'.
Static level 50' below casing top which is 1' above GL
Pumping level 100' when pumping at 12 gpm for 2 hours
Permanent pump installed at 100' on November 15, 2004, with a capacity of 12 gpm

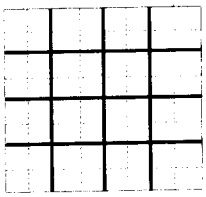
Additional location info: Lot , subdivision.

Address of well: 25132 Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: October 8, 2004 **Permit #:**

COMPANY Area Well & Pump
FARM Johnson, Bob
DATE DRILLED October 14, 2004 **NO.** 1
ELEVATION 0 **COUNTY NO.** 41459
LOCATION SE SW NE
LATITUDE 41.355306 **LONGITUDE** - 88.216973
COUNTY Will **API** 121974145900



8 - 33N - 9E

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
clay	0	5
gravel & clay	5	12
limestone	12	25
shale	25	83
limestone	83	86
shale	86	134
limestone	134	165
Total Depth		165

Casing: 4" from 75' to 135'
5" from -1' to 83'

Grout: NEAT CEMENT from 8 to 83.
Water from limestone at 150' to 165'.
Static level 43' below casing top which is 1' above GL
Pumping level 55' when pumping at 10 gpm for 4 hours
Permanent pump installed at 80' on June 30, 2005, with a capacity of 10 gpm

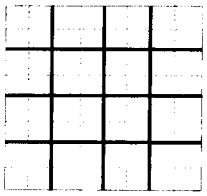
Additional location info: Lot 18, subdivision.

Address of well: 25148 Cottage Rd.
Wilmington, IL

Location source: Location from permit

Permit Date: May 25, 2005 **Permit #:**

COMPANY Doyle, Gerald
FARM Garrone, Frank
DATE DRILLED June 27, 2005 **NO.** 1
ELEVATION 0 **COUNTY NO.** 41578
LOCATION NE SW NE
LATITUDE 41.357116 **LONGITUDE** - 88.217068
COUNTY Will **API** 121974157800 **8 - 33N - 9E**



APPENDIX C

QUALITY ASSURANCE PROGRAM - TELEDYNE BROWN ENGINEERING,INC.

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Rev. 8 Effective October 26, 2005
Document K-QAM-1

Quality Assurance Manual

For

Teledyne Brown Engineering

Environmental Services

2508 Quality Lane
Knoxville, Tennessee 37931-3133
865-690-6819

Generated by: Lynne Perry
Lynne Perry, QA Manager

Approved by: Keith Jeter
Keith Jeter, Operations Manager

Copy No.: Original
Issued To: Lynne Perry
Date: 10/26/05

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REVISION HISTORY

Revision 7	Complete re-write	January 1, 2005	Bill Meyer
Revision 8	Updated organization chart, minor change to 1.0, 4.4, 7.5.3.2, 10.2.3, and 12.3		

1.0 Knoxville QAM Section Introduction

This Quality Assurance Manual (QAM) and related Procedures describes the Knoxville Environmental Services Laboratory's QA system. This system is designed to meet multiple quality standards imposed by Customers and regulatory agencies including:

NRC's 10 CFR 50 Appendix B
NRC's Regulatory Guide 4.15
DOE's Order 414.1
DOE's QSAS
ANSI N 42.23
ANSI N 13.30
NELAC Standard, Chapter 5

The Environmental Services (ES) Laboratory does low level radioactivity analyses for Power Plants and other customers. It primarily analyzes environmental samples (natural products from around plants such as milk), in-plant samples (air filters, waters), bioassay samples from customer's employees, and waste disposal samples (liquids and solids).

Potable and non-potable water samples are tested using methods based on EPA standards as cited in State licenses (see Procedure 4010). The listing [current as of initial printing of this Manual – see current index for revision status and additions / deletions] of implementing Procedures (SOPs) covering Administration, Methods, Counting Instruments, Technical, Miscellaneous, and LIMS is shown in Table 1-1. Reference to these Procedures by number is made throughout this QAM.

Table 1-1

Number	Title
Part 1	**Administrative Procedures**
1001	Validation and Verification of Computer Programs for Radiochemistry Data Reduction
1002	Organization and Responsibility
1003	Control, Retention, and Disposal of Quality Assurance Records
1004	Definitions
1005	Data Integrity
1006	Job Descriptions
1007	Training and Certifications
1008	Procedure and Document Control
1009	Calibration System
1010	Nonconformance Controls
1011	10CFR21 Reporting
1012	Corrective Action and Preventive Action

Number	Title
1013	Internal Audits and Management Reviews
1014	RFP, Contract Review, and Order Entry (formerly 4001)
1015	Procurement Controls
Part 2	**Method Procedures**
2001	Alpha Isotopic and Plutonium-241
2002	Carbon-14 Activity in Various Matrices
2003	Carbon-14 and Tritium in Soils, Solids, and Biological Samples; Harvey Oxidizer Method
2004	Cerium-141 and Cerium-144 by Radiochemical Separation
2005	Cesium-137 by Radiochemical Separation
2006	Iron-55 Activity in Various Matrices
2007	Gamma Emitting Radioisotope Analysis
2008	Gross Alpha and/or Gross Beta Activity in Various Matrices
2009	Gross Beta Minus Potassium-40 Activity in Urine and Fecal Samples
2010	Tritium and Carbon-14 Analysis by Liquid Scintillation
2011	Tritium Analysis in Drinking Water by Liquid Scintillation
2012	Radioiodine in Various Matrices
2013	Radionickel Activity in Various Matrices
2014	Phosphorus-32 Activity in Various Matrices
2015	Lead-210 Activity in Various Matrices
2016	Radium-226 Analysis in Various Matrices
2017	Total Radium in Water Samples
2018	Radiostrontium Analysis by Chemical Separation
2019	Radiostrontium Analysis by Ion Exchange
2020	Sulfur-35 Analysis
2021	Technetium-99 Analysis by Eichrom Resin Separation
2022	Total Uranium Analysis by KPA
2023	Compositing of Samples
2024	Dry Ashing of Environmental Samples
2025	Preparation and Standardization of Carrier Solutions
2026	Radioactive Reference Standard Solutions and Records
2027	Glassware Washing and Storage
2028	Moisture Content of Various Matrices
2029	Polonium-210 Activity in Various Matrices
2030	Promethium-147 Analysis

Number	Title
Part 3	**Instrument Procedures**
3001	Calibration and Control of Gamma-Ray Spectrometers
3002	Calibration of Alpha Spectrometers
3003	Calibration and Control of Alpha and Beta Counting Instruments
3004	Calibration and Control of Liquid Scintillation Counters
3005	Calibration and Operation of pH Meters
3006	Balance Calibration and Check
3008	Negative Results Evaluation Policy
3009	Use and Maintenance of Mechanical Pipettors
3010	Microwave Digestion System Use and Maintenance
Part 4	**Technical Procedures**
4001	Not Used
4002	QC Checks on Data
4003	Sample Regent and Control
4004	Data Package Preparation and Reporting
4005	Blank, Spike, and Duplicate Controls
4006	Inter-Laboratory Comparison Study Process
4007	Method Basis and Initial Validation Process
4008	Not Used
4009	MDL Controls
4010	State Certification Process
4011	Accuracy, Precision, Efficiency, and Bias Controls and Data Quality Objectives
4012	Not Used
4013	Not Used
4014	Facility Operation and Control
4015	Documentation of Analytical Laboratory Logbooks (formerly 1002)
4016	Total Propagated Uncertainty (formerly 1004)
4017	LIMS Operation
4018	Instrument Calibration System
4019	Radioactive Reference Material Standards
Part 5	**Miscellaneous Procedures**
5001	Laboratory Hood Operations
5002	Operation and Maintenance of Deionized Water System
5003	Waste Management
5004	Acid Neutralization and Purification System Operation Procedure

Part 6	LIMS
6001	LIMS Raw Data Processing and Reporting
6002	Software Development and/or Pilots of COTS Packages
6003	Software Change and Version Control
6004	Backup of Data and System Files
6005	Disaster Recovery Plan
6006	LIMS Hardware
6007	LIMS User Access
6008	LIMS Training
6009	LIMS Security

2.0 QUALITY SYSTEM

The TBE-ES QA system is designed to comply with multiple customer- and regulatory agency-imposed specifications related to quality. This quality system applies to all activities of TBE-ES that affect the quality of analyses performed by the laboratory.

2.1 Policy

The TBE quality policy, given in Company Policy P-501, is "TBE will continually improve our processes and effectiveness in providing products and services that exceed our customer's expectations."

This policy is amplified by this Laboratory's commitment, as attested to by the title page signatures, to perform all work to good professional practices and to deliver high quality services to our customers with full data integrity. (See Section 4.0 and Procedure 1005).

2.2 Quality System Structure

The Quality System is operated by the organizations described in Section 3.0 of this Manual. The Quality System is described in this Manual and in the Procedures Manual, both of which are maintained by the QA Manager. Procedures are divided into 6 sections – Administrative, Methods, Equipments, Technical, Miscellaneous, and LIMS. This Manual is structured as shown in the Table of Contents and refers to Procedures when applicable. Cross references to the various imposed quality specifications are contained in Appendices to this Manual.

2.3 Quality System Objectives

The Quality System is established to meet the objective of assuring all operations are planned and executed in accordance with system requirements. The Quality System also assures that performance evaluations are performed (see Procedure 4006), and that appropriate verifications are performed (see Procedures in the 1000 and 4000 series) to further assure compliance. Verification includes

examination of final reports (prior to submittal to customers) to determine their quality (see Procedure 4004).

To further these objectives, various in-process assessments of data, as well as assessments of the system, via internal audits and management reviews, are performed. Both internal experts and customer / regulatory agencies perform further assessments of the system and compliance to requirements.

2.4 Personnel Orientation, Training, and Qualification

TBE provides indoctrination and training to employees and performs proficiency evaluation of technical personnel. This effort is described in Section 4.0.

3.0 ORGANIZATION, AUTHORITY, AND RESPONSIBILITY

TBE has established an effective organization for conducting laboratory analyses at the Knoxville Environmental Services Laboratory. The basic organization is shown in Figure 3-1. Detail organization charts with names, authorities, and responsibilities are given in Procedure 1002. Job descriptions are given in Procedure 1006.

This organization provides clearly established Quality Assurance authorities, duties, and functions. QA has the organizational freedom needed to:

(1) Identify problems
(2) Stop nonconforming work
(3) Initiate investigations
(4) Recommend corrective and preventive actions
(5) Provide solutions or recommend solutions
(6) Verify implementation of actions

All Laboratory personnel have the authority and resources to do their assigned duties and have the freedom to act on problems. The QA personnel have direct, independent access to Company management as shown in Figure 3-1.

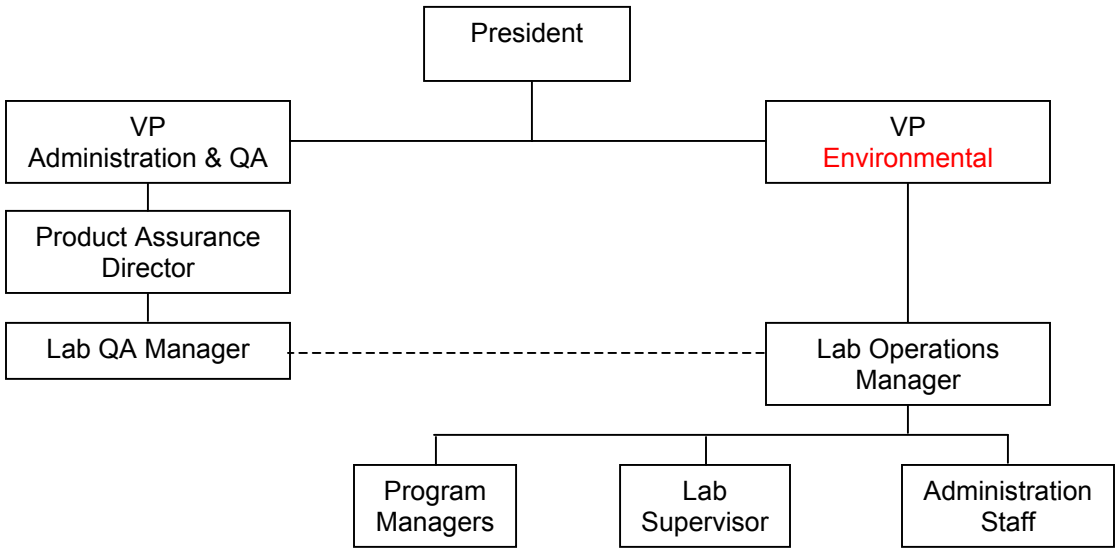

Figure 3.1. Laboratory Organization

4.0 PERSONNEL ORIENTATION, DATA INTEGRITY, TRAINING, AND QUALIFICATION

4.1 Orientation

All laboratory personnel must receive orientation to the quality program if their work can affect quality. Orientation includes a brief review of customer- and regulatory agency-imposed quality requirements, the structure of the QAM, and the implementing procedures. The goal of orientation is to cover the nature and goals of the QA program.

4.2 Data Integrity

The primary output of the Laboratory is data. Special emphasis and training in data integrity is given to all personnel whose work provides or supports data delivery. The Laboratory Data Integrity Procedure (Procedure 1005) describes training, personnel attestations, and monitoring operations. Annual reviews are required.

4.3 Training

The Quality Assurance Manager (QAM) maintains a training matrix indicating which laboratory personnel need training in which specific Procedures. This matrix is updated when personnel change or change assignments. All personnel are trained per these requirements and procedures. This training program is described in Procedure 1007. The assigned responsibilities for employees are described in Procedure 1002 (See Section 3.0) on Organization and in Procedure 1006, Job Descriptions. Refresher training or re-training is given annually as appropriate.

4.4 Qualification

Personnel are qualified as required by their job description. Management and non-analysts are evaluated based on past experience, education, and management's assessment of their capabilities. Formal qualification is required of analysts and related technical personnel who perform laboratory functions. Each applicable person is given training and then formally evaluated by the Operations Manager (or his designees) and by QA. Each analyst must initially demonstrate capability to perform each assigned analytical effort. Each year, thereafter, he or she must perform similar analyses on Interlab Comparison Samples (see Procedure 4006) or on equivalent blanks and spikes samples. Acceptable results extend qualifications (certification). Unacceptable results require retraining in the subject method / Procedures. (See Procedure 1007 for added information, records, forms, etc. used.)

4.5 Records

Records of training subjects, contents, attendees, instructors, and certifications are maintained by QA.

5.0 CUSTOMER INTERFACES

5.1 Interface Personnel

The Laboratory has designated Program Managers as the primary interface with all customers. Other interfaces may be the QA Manager or the Lab Operations Manager.

5.2 Bid Requests and Tenders

The Program Managers respond to customer requests for bids and proposals per Procedure 1014 for bids, proposals, and contract reviews. They clarify customer requests so both the customer and the lab staff understand requests. As responses are developed, internal reviews are conducted to ensure that requirements are adequately defined and documented and to verify that the Laboratory has adequate resources in physical capabilities, personal skills, and technical information to perform the work. Accreditation needs are reviewed. If subcontracts are required to perform any analysis, the subcontractor is similarly evaluated and the client notified in writing of the effort. Most qualifications are routine with standard pricing and the review of these quotes is performed by the Program Manager. Larger or more complex quotes are reviewed by the Operations Manager and the QA Manager (or designees). Evidence of review is by initialing and dating applicable papers, signatures on quotations, or by memo.

5.3 Contracts

The Program Manager's receive contract awards (oral or written) and generate the work planning for initiation preparation (charge numbers, data structure or contents in LIMS, etc.). They review contracts for possible differences from quotations and, if acceptable, contracts are processed. Documentation of the review is by initials and date as a minimum. Contract changes receive similar reviews and planning.

5.4 TBE's Expectation of Customers

TBE expects customers to provide samples suitable for lab analysis. These expectations include:

- Accurate and unambiguous identification of samples
- Proper collection and preservation of samples
- Use of appropriate containers free from external and internal contamination
- Integrity preservation during shipment and timely delivery of samples that are age sensitive
- Adequate sized samples that allow for retest, if needed
- Specification of unique MOA/MDC requirements
- Alerting the lab about abnormal samples (high activity, different chemical contents, etc.)
- Chain of custody initiation, when required.

5.5 Customer Satisfaction

TBE's quality policy centers on customer satisfaction (See 2.0). TBE will work to satisfy customers through full compliance with contract requirements, providing accurate data and properly responding to any questions or complaints. Customers are provided full cooperation in their monitoring of Laboratory performance. Customers are notified if any applicable State Accreditation is withdrawn, revoked, or suspended.

5.5.1 Customer Complaints

Any customer complaints are documented and tracked to closure. Most complaints concern analysis data and are received by Program Managers. They log each such complaint, order retests for verification, and provide documented results to customers. Complaints may also be received by QA or Operations.

If complaints are other than re-test type, the nonconformance and corrective action systems (Sections 12 and 13) are used to resolve them and record all actions taken.

5.5.2 Customer Confidentiality

All laboratory personnel maintain confidentiality of customer-unique information.

6.0 DOCUMENTATION GENERATION & CONTROL

6.1 General

The documentation generation and control system is detailed in Procedure 1008. An overview is given below. The basic quality system documents are described in Section 2.0.

6.2 New Documentation

Each Procedure and this QAM is written by appropriate personnel, validated if applicable (see Section 7.0), reviewed for adequacy, completeness, and correctness, and, if acceptable, accepted by the authorized approver [QA Manager, Operations Manager (or their designee)]. Both approvals are required if a Procedure affects both QA and Operations. (See Responsibilities in Section 3.0). These procedures control the quality measurements and their accuracy.

Each document carries a unique identification number, a revision level, dates, page numbers and total page count, and approver identification and sign off. If TBE writes code for software, the software is version identified and issued after Verification and Validation per Section 7.0.

6.3 Documentation Changes

Each change is reviewed in the same manner and by the same people as new documentation. Revision identifications are updated and changes indicated by side bars, italicized words, or by revision description when practical. Obsolete revisions are maintained by QA after being identified as obsolete.

6.4 Documentation Lists and Distributions

Computer indexes of documents are maintained by Quality showing the current authorized revision level of each document. These revisions are placed on the Laboratory server and obsolete ones are removed so that all personnel have only the current documents. If hard copies are produced and distributed, separate distribution lists are maintained indicating who has them and their revision level(s). Copies downloaded off the server are uncontrolled unless verified by the user (on the computer) to be the latest revision.

6.5 Other Documentation

In addition to TBE-generated documentation, QA maintains copies of applicable specifications, regulations, and standard methods.

6.6 Documentation Reviews

Each issued document is reviewed at least every third year by the approving personnel. This review determines continued suitability for use and compliance with requirements.

7.0 DESIGN OF LABORATORY CONTROLS

7.1 General

The Laboratory and its operating procedures are designed specifically for low level (environmental and in-plant) radioactive sample analysis. The various aspects of the laboratory design include the following which are discussed in subsequent paragraphs of this Section:

(a) Facility
(b) Technical Processes and Methods
(c) Verification of Design of Processes, Methods, and Software.
(d) Design of Quality Controls
(e) Counting Instrument Controls

7.2 Facility

The facility was designed and built in 2000 to facilitate correct performance of operations in accordance with good laboratory practices and regulatory requirements. It provides security for operations and samples. It separates sample storage areas based on activity levels, separates wet chemistry from counting instrumentation for contamination control, and provides space and electronic systems for documentation, analysis, and record storage. Procedure 4014 describes the facility, room uses, layouts, etc.

7.3 Technical Processes and Methods

7.3.1 Operational Flow

The laboratory design provides for sample receipt and storage (including special environmental provisions for perishable items) where samples are received from clients and other labs (see Section 9.0). The samples are logged into the computer based Laboratory Information Management System (LIMS) and receive unique identification numbers and bar code labels. (See Procedure 4017 for LIMS description and user procedures). The Program Managers then plan the work and assure LIMS contains any special instructions to analysts. Samples then go to sample preparation, wet chemistry (for chemical separation), and counting based on the radionuclides. See Procedures in the 2000 and 3000 series. Analysts perform the required tasks with data being entered into logbooks, LIMS, and counting equipment data systems as appropriate. Results are collected and reviewed by the Operations Manager and Program Managers and reports to clients are generated (See Section 14.0). All records (electronic or hard copy) are maintained in files or in back-up electronic copies (see Section 15.0). After the required hold periods and client notification and approval, samples are disposed of in compliance with regulatory requirements (see Procedures 5003 and 5004).

7.3.2 Methods

The laboratory methods documented in the 2000 and 3000 series of Procedures were primarily developed by senior TBE laboratory personnel based on years of experience at our prior facility in New Jersey. They have been improved, supplemented and implemented here. Where EPA or other accepted national methods exist (primarily for water analyses under State certification programs - see Procedure 4010), the TBE methods conform to the imposed requirements or State accepted alternate requirements. Any method modifications are documented and described in the Procedure. There are no nationally recognized methods for most other analysis methods but references to other method documents are noted where applicable.

7.3.3 Data Reduction and Analysis

Whenever possible automatic data capture and computerized data reduction programs are used. Calculations are either performed using commercial software (counting system operating systems) or TBE developed and validated software is used (see 7.4 below). Analysis of reduced data is performed as described in Section 14.0 and Procedure 4004.

7.4 Verification of Technical Processes, Methods, and Software

7.4.1 Operational Flow Verification

The entire QA Manual and related procedures describe the verification of elements of the technical process flow and the establishment of quality check points, reviews, and controls.

7.4.2 Method Verifications

Methods are verified and validated per Procedure 4007 prior to use unless otherwise agreed to by the client. For most TBE methods initial validation occurred well in the past. New or significantly revised Methods receive initial validation by demonstration of their performance using known analytes (NIST traceable) in appropriate matrices. Sufficient samples are run to obtain statistical data that provides evidence of process capability and control, establishes detection levels (see procedure 4009), bias and precision data (see Procedure 4011). All method procedures and validation data are available to respective clients. Also see Section 7.5 below for the Demonstration of Capability program.

7.4.3 Data Reduction and Analysis Verification

Data reduction and analysis verification is performed by personnel who did not generate the data. (See Section 14.0).

7.5 Design of Quality Controls

7.5.1 General

There are multiple quality controls designed into the laboratory operations. Many of these are described elsewhere in this manual and include personnel qualification (Section 4.0), Document control (6.0), Sample identification and control (9.0), Use of reference standards (10.0), intra- and inter- laboratory tests (10.0), etc. This Section describes the basic quality control systems used to verify Method capability and performance.

7.5.2 Demonstration of Capability (D of C)

The demonstration of capability system verifies and documents that the method, analyst, and the equipment can perform within acceptable limits. The D of C is certified for each combination of analyte, method, and instrument type. D of C's are certified based on objective evidence at least annually. This program is combined with the analyst D of C program (See Section 4.0). Initial D of C's use the method validation effort as covered above. Subsequent D of C's use Inter-Laboratory samples (Procedure 4006) or, if necessary, laboratory generated samples using NIST traceable standards. If results are outside of control limits, re-demonstration is required after investigation and corrective action is accomplished (See Sections 12.0 and 13.0)

7.5.3 Process Control Checks

Process control checks are designed to include Inter-Lab samples, Intra-lab QC check samples, and customer provided check samples. 10% of laboratory analysis samples are for process control purposes.

7.5.3.1 Inter- Lab Samples. Inter-lab samples are procured or obtained from sources providing analytes of interest in matrices similar to normal client samples. These samples may be used for Demonstration of Capability of analyst's, equipment and methods. They also provide for independent insight into the lab's process capabilities. Any value reported as being in the warning zone (over 2 sigma) is reviewed and improvements taken. Any value failing (over 3 sigma) is documented on an NCR and formal investigation per Section 12.0 and 13.0 is performed. If root causes are not clearly understood and fixed, re-tests are required using lab prepared samples (See Procedure 4006).

7.5.3.2 QC Samples. QC samples, along with Inter-lab samples and customer check samples, are 10% of the annual lab workload for the applicable analyte and method. If batch processing is used, some specifications require specific checks with each batch or each day rather than as continuous process controls. (See Procedure 4005)

QC samples consist of multiple types of samples including:

(a) Method blanks
(b) Blank spikes
(c) Matrix spikes

(d) Duplicates
(e) Tracers and carriers

Acceptance limits for these samples are given in Procedures or in lab standards. The number, frequency, and use of these sample types varies with the method, matrix, and supplemental requirements. The patterns of use versus method and the use of the resulting test data is described in Procedure 4005.

7.5.3.3 Customer Provided Check Samples. Customers may provide blind check samples and duplicates to aid in their evaluation of the Laboratory. When the lab is notified that samples are check samples their results are included in the QC sample percentage counts. Any reported problems are treated as formal complaints and investigated per Section 5.

7.6 Counting Instrument Controls

The calibration of instruments is their primary control and is described in Section 11.0. In addition, counting procedures (3000 series) also specify use of background checks (method blank data is not used for this) to evaluate possible counting equipment contamination. Instrument calibration checks using a lab standard from a different source than the one used for calibration are also used. Background data can be used to adjust client and test data. Checks with lab standards indicate potential calibration changes.

8.0 PURCHASING AND SUBCONTRACT CONTROLS

8.1 General

Procurement and Subcontracts efforts use the Huntsville-based Cost Point computer system to process orders. The Laboratory-generated Purchase Requisitions are electronically copied into Purchase Orders in Huntsville. The Laboratory also specifies sources to be used. Procured items and services are received at the Laboratory where receiving checks and inspections are made. Laboratory Procedure 1015 provides details on the procurement control system at the Laboratory and references the Huntsville procedures as applicable.

8.2 Source Selection

Sources for procurements of items and services are evaluated and approved by QA as described in Procedure 1015. Nationally recognized catalog item sources are approved by the QA Manager based on reputation. Maintenance services by an approved distributor or the equipment manufacturing company are pre-approved. Sources for other services are evaluated by QA, based on service criticality to the quality system, by phone, mail out, or site visit.

Subcontract sources for laboratory analysis services are only placed with accredited laboratories (by NELAP, NUPIC, State, Client, etc.) as applicable for the type of analysis to be performed. QA maintains lists of approved vendors and records of evaluations performed.

8.3 Procurement of Supplies and Support Services

8.3.1 Catalog Supplies

The Laboratory procures reagents, processing chemicals, laboratory "glassware," consumables, and other catalog items from nationally known vendors and to applicable laboratory grades, purities, concentrations, accuracy levels, etc. Purchase Requisitions for these items specify catalog numbers or similar call-outs for these off-the-shelf items. Requisitions are generated by the personnel in the lab needing the item and are approved by the Operations or Production Manager. Reagents are analytical reagent grade only.

8.3.2 Support Services

Purchase Requisitions for support services (such as balance calibration, equipment maintenance, etc.) are processed as in 8.3.1 but technical requirements are specified and reviewed before approvals are given.

8.3.3 Equipment and Software

Purchase Requisitions for new equipment, software programs, and major facility modifications affecting the quality system are reviewed and approved by the Operations Manager and the QA Manager.

8.4 Subcontracting of Analytical Services

When necessary, the Laboratory may subcontract analytical services required by a client. This may be because of special needs, infrequency of analysis, etc. Applicable quality and regulatory requirements are imposed in the Purchase Requisition and undergo a technical review by QA. TBE reserves the right of access by TBE and our client for verification purposes.

8.5 Acceptance of Items or Services

Items and services affecting the quality system are verified at receipt based on objective evidence supplied by the vendor. Supply items are reviewed by the requisitioner and, if acceptable, are accepted via annotation on the vendor packing list or similar document. Similarly, equipment services are accepted by the requisitioning lab person. Calibration services are accepted by QA based on certification reviews. (See Section 11.0.)

Data reports from analytical subcontractors are evaluated by Program Managers and subsequently by the Operations Manager (or designee) as part of client report reviews.

Items are not used until accepted and if items or services are rejected, QA is notified and nonconformance controls per Section 12.0 are followed. Vendors may be removed from the approved vendor's list if their performance is unacceptable.

9.0 TEST SAMPLE IDENTIFICATION AND CONTROL

9.1 Sample Identification

Incoming samples are inspected for customer identification, container condition, chain of custody forms, and radioactivity levels. If acceptable, the sample information is entered into LIMS which generates bar coded labels for attachment to the sample(s). The labels are attached and samples stored in the assigned location. If environmental controls are needed (refrigeration, freezing, etc.), the samples are placed in these storage locations. If not acceptable, the Program Manager is notified, the customer contacted, and the problem resolved (return of sample, added data receipts, etc.). See Procedure 4003 for more information on sample receipt.

9.2 LIMS

The LIMS is used to schedule work, provide special information to analysts, and record all actions taken on samples. See Procedure 4017 and the 6000 series of procedures for more information on LIMS operations.

9.3 Sample Control

The sample, with its bar coded label, is logged out to the applicable lab operation where the sample is processed per the applicable methods (Procedures 2000 and 3000). The LIMS-assigned numbers are used for identification through all operations to record data. Data is entered into LIMS, log books (kept by the analysts) or equipment data systems to record data. The combination of LIMS, logbooks, and equipment data systems provide the Chain of Custody data and document all actions taken on samples. Unused sample portions are returned to its storage area for possible verification use. Samples are discarded after required time limits are passed and after client notification and approval, if required.

10.0 SPECIAL PROCESSES, INSPECTION, AND TEST

10.1 Special Processes

The Laboratory's special processes are the methods used to analyze a sample and control equipment. These methods are defined in Procedures in the 2000 and 3000 series. These processes are performed to the qualified methods (see Section 7.0) by qualified people (see 4.0).

10.2 Inspections and Tests

The quality of the process is monitored by indirect means. This program involves calibration checks on counting equipments (see Section 11.0), intra-laboratory checks, and inter-laboratory checks. In addition, some customers submit quality control check samples (blinds, duplicates, external reference standards). All generated data gets independent reviews.

10.2.1 Intra Laboratory Checks (QC Checks)

The quantity and types of checks varies with the method, but basic checks which may include blanks, spiked blanks, matrix spikes, matrix spike duplicates, and duplicates are used as appropriate for customer samples. This process is described in Procedure 4005 and in Section 7.0.

10.2.2 Inter Laboratory Checks

TBE participates in Inter-lab performance evaluation (check) programs with multiple higher level labs. These programs provide blind matrices for the types of matrix/analyte combinations routinely processed by the Lab, if available. This program is described in Procedure 4006.

10.2.3 Data Reviews

Raw data and reports are reviewed by the Operations Manager, or designees. This review checks for data logic, expected results, procedure compliance, etc. (See Section 14.0).

10.3 Control of Sampling of Samples

Samples for analysis are supplied by customers preferably in quantities sufficient to allow re-verification analyses if needed. The samples are prepared for analysis by analysts and then an aliquot (partial sample extraction) is taken from the homogeneous customer sample for the initial analysis. Methods specify standard volumes of sample material required. Sampling data is recorded in LIMS and/or logbooks.

10.4 Reference Standards / Material

10.4.1 Weights and Temperatures

Reference standards are used by the Laboratory's calibration vendor to calibrate the Labs working instruments measuring weights and thermometers.

10.4.2 Radioactive Materials

Reference radioactive standards, traceable to NIST, are procured from higher level laboratories. These reference materials are maintained in the standards area and are diluted down for use by laboratory analysts. All original and diluted volumes are fully traceable to source, procedure, analyst, dilution, and acquisition dates. See Section 11.0 and Procedure 1009.

11.0 EQUIPMENT MAINTENANCE AND CALIBRATION

11.1 General

There are two types of equipment used by the Laboratory: support equipment (scales, glassware, weights, thermometers, etc.) and instruments for counting. Standards traceable to NIST are used for calibration and are of the needed accuracy for laboratory operations. Procedures 1009, 4018, and 4019 describe the calibration and maintenance programs.

11.2 Support Equipment

Analytical support equipment is purchased with the necessary accuracies and appropriate calibration data. If needed, initial calibration by the Laboratory or its calibration vendor is performed. Recalibration schedules are established and equipment recalibrated by the scheduled date by a calibration vendor or by Laboratory personnel. Maintenance is performed, as needed, per manufacturer's manuals or lab procedures.

In addition to calibrations and recalibrations, checks are made on the continued accuracy of items as described in Procedure 1009. Records are maintained of calibration and specified checks.

11.3 Instruments

Instruments receive initial calibration using radioactive sources traceable to NIST. The initial calibration establishes statistical limits of variation that are used to set control limits for future checks and recalibration. This process is described in Procedure 4018. Instruments are maintained per Instrument Manual requirements. Recalibrations are performed per the Procedure.

Between calibrations, check sources are used to assure no significant changes have occurred in the calibration of items. Background checks are performed to check for possible radioactive contamination. Background values are used to adjust sample results. Hardware and software are safeguarded from adjustments that could invalidate calibrations or results.

11.4 Nonconformances and Corrective Actions

If calibrations or checks indicate a problem, the nonconformance system (Section 12.0) and corrective action system (Section 13.0) are initiated to document the problem and its resolution. Equipment is promptly removed from service if questionable.

11.5 Records

Records of calibrations are maintained. Calibration certificates from calibration vendors are maintained by QA. Other calibration data and check data is maintained in log books, LIMS, or instrument software as appropriate and as described in Procedures 1009, 4018, and 4019.

12.0 NONCONFORMANCE CONTROLS

12.1 General

The nonconformance control system is implemented whenever a nonconforming condition on any aspect of Laboratory analysis, testing, or results exist. The system takes graded actions based on the nature and severity of the nonconformance. Nonconforming items or processes are controlled to prevent inadvertent use. Nonconformances are documented and dispositioned. Notification is made to affected organizations, including clients. Procedure 1010 describes the procedures followed. Sample results are only reported after resolution.

12.2 Responsibility and Authority

Each Laboratory employee has the responsibility to report nonconformances and the authority to stop performing nonconforming work or using nonconforming equipment. Laboratory supervision can disposition and take corrective actions on minor problems. Any significant problem is documented by QA using the Laboratory's NCR system per Procedure 1010. QA conducts or assures the conduct of cause analyses, disposition of items or data, and initiation of corrective action if the nonconformance could recur.

12.3 10CFR21 Reporting

The QA Manager reviews NCRs for possible need of customer and/or NRC notification per the requirements of 10CFR21. Procedure 1011 is followed in this review and for any required reporting.

13.0 CORRECTIVE AND PREVENTIVE ACTIONS

13.1 General

The Laboratory takes corrective actions on significant nonconformances (see Section 12.0). It also initiates preventive and improvement actions per the Company Quality Policy (see Section 2.0). The procedures for Corrective Action/Preventive Action systems are contained in Procedure 1012.

13.2 Corrective Actions

Corrective actions are taken by Operations and Quality to promptly correct significant conditions adverse to quality. The condition is identified and cause analysis is performed to identify root causes. Solutions are evaluated and the optimum one selected that will prevent recurrence, can be implemented by the Laboratory, allows the Laboratory to meet its other goals, and is commensurate with the significance of the problem. All steps are documented, action plans developed for major efforts, and reports made to Management. QA verifies the implementation effectiveness. Procedure 1012 provides instructions and designates authorities and responsibilities.

13.3 Preventive Actions

Preventive actions are improvements intended to reduce the potential for nonconformances. Possible preventive actions are developed from suggestions from employees and from analysis of Laboratory technical and quality systems by management. If preventive actions or improvements are selected for investigation, the issues, investigation, recommendations, and implementation actions are documented. Follow up verifies effectiveness.

14.0 RESULTS ANALYSIS AND REPORTING

14.1 General

The Laboratory's role is to provide measurement-based information to clients that is technically valid, legally defensible, and of known quality.

14.2 Results Review

The results obtained from analytical efforts are collected and reviewed by the Operations Manager and the Program Manager. This review verifies the reasonableness and consistency of the results. It includes review of sample and the related QC activity data. Procedure 4002 describes the process. Any deficiencies are corrected by re-analyses, recalculations, or corrective actions per Sections 12.0 and 13.0. Use of the LIMS with its automatic data loading features (see Procedure 4017) minimizes the possibility of transcription or calculation errors.

14.3 Reports

Reports range from simple results reporting to elaborate analytical reports based on the client requirements and imposed specifications and standards. (See Procedure 4004.) Reports present results accurately, clearly, unambiguously, objectively, and as required by the applicable Method(s). Reports include reproduction restrictions, information on any deviations from methods, and any needed data qualifiers based on QC data. If any data is supplied by analytical subcontractors (see Section 8.0), it is clearly identified and attributed to that Laboratory by either name or accreditation number.

If results are faxed or transmitted electronically, confidentiality statements are included in case of receipt by other than the intended client.

Reports are approved by the Program Manager and Operations Manager and record copies kept in file (See Section 15.0).

15.0 RECORDS

15.1 General

The Laboratory collects generated data and information related to quality or technical data and maintains them as records. Records are identified, prepared, reviewed, placed in storage, and maintained as set forth in Procedure 1003.

15.2 Type of Records

All original observations, calculations, derived data, calibration data, and test reports are included. In addition QA data such as audits, management reviews, corrective and preventive actions, manuals, and procedures are included.

15.3 Storage and Retention

Records are stored in files after completion in the lab. Files are in specified locations and under the control of custodians. Filing systems provide for retrieval. Electronic files are kept on Company servers (with regular back up) or on media stored in fireproof file cabinets. Records are kept in Laboratory files for at least 2 years after the last entry and then in Company files for another year as a minimum. Some customers specify larger periods – up to 7 years – which is also met. Generic records supporting multiple customers are kept for the longest applicable period.

15.4 Destruction or Disposal

Records may be destroyed after the retention period and after client notification and acceptance, if required. If the Laboratory closes, records will go in to company storage in Huntsville unless otherwise directed by customers. If the Laboratory is sold, either the new owner will accept record ownership or the records will go into Company storage as stated above.

16.0 ASSESSMENTS

16.1 General

Assessments consist of internal audits and management reviews as set forth in Procedure 1013.

16.2 Audits

Internal audits are planned, performed at least annually on all areas of the quality system, and are performed by qualified people who are as independent as possible from the activity audited. (The Laboratory's small size inhibits full independence in some technical areas.) Audits are coordinated by the Quality Manager who assures audit plans and checklists are generated and the results documented. Reports include descriptions of any findings and provide the auditor's assessment of the effectiveness of the audited activity. Report data includes personnel contacted.

Audit findings are reviewed with management and corrective actions agreed to and scheduled. Follow up is performed by QA to verify accomplishment and effectiveness of the corrective action.

16.3 Management Reviews

The Annual Quality Assurance Report, prepared for some clients, is the Management Review vehicle. These reports cover audit results, corrective and preventive actions, external assessments, and QC and inter-laboratory performance checks. The report is reviewed with Management by the QA Manager for the continued suitability of the Quality Program and its effectiveness. Any needed improvements are defined, documented, and implemented. Follow ups are made to verify implementation and effectiveness.

APPENDIX D

LABORATORY ANALYTICAL REPORTS

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28777

Exelon - Dresden

June 6, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28777
EX001-3ESPDRES-06

06/06/2006 16:44

Sample Receipt

The following samples were received on May 30, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-DSP-DN-105-052306-JL-051	L28777-1	
WG-DN-DSP-DN-106-052306-JL-052	L28777-2	
WG-DN-DSP-DN107-052306-JL-053	L28777-3	
WG-DN-DSP-152-052306-JH-001	L28777-4	
WG-DN-DSP-157M-052306-JH-002	L28777-5	
WG-DN-DSP-157S-052306-JH-003	L28777-6	
WG-DN-DSP-DN-150-052406-JL-054	L28777-7	
WG-DN-DSP-DN-151-052406-JL-055	L28777-8	
WG-DN-DSP-DN-108-052406-JL-056	L28777-9	
WG-DN-DSP-126-052406-JH-004	L28777-10	
WG-DN-DSP-153-052406-JH-005	L28777-11	
WG-DN-DSP-154-052506-JH-006	L28777-12	
WG-DN-DSP-158M-052506-JH-007	L28777-13	
WG-DN-DSP-158S-052506-JH-008	L28777-14	
WG-DN-DSP-159M-052506-JH-009	L28777-15	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28777
EX001-3ESPDRES-06

06/06/2006 16:44

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4063.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-DN-105-052306-JL-051	L28777-1	WG4063-1

H-3

Quality Control

Quality control samples were analyzed as WG4066.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-DN-105-052306-JL-051	L28777-1	WG4066-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28777
EX001-3ESPDRES-06

06/06/2006 16:44

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4092.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-DN-105-052306-JL-051	L28777-1	WG4092-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

05/30/06 13:11

SR #: SR08626

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06 LIMS #: L28777

Initiated By: BWILKERSON
Init Date: 05/30/06 Receive Date: 05/30/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	N	
	WG-DN-DSP-159M-052506-JH-009		Label on tritium bottle damaged, hard to read
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	Y	Ph at or below 2
9	Other (Describe)	NA	

L28777

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teallyne Brown

REFERENCE NUMBER: 451360-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Lozwick **PRINTED NAME:** Julie Lozwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Strontium 89/90	Gamma Spec	REMARKS
	5/23/06	1130	WG-DN-DSP-DN-105-052306-JL-051	W	2	X	X	X	
		1230	WG-DN-DSP-DN-106-052306-JL-052	W	2	X	X	X	
		1350	WG-DN-DSP-DN-107-052306-JL-053	W	2	X	X	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: (1) K. Ramniga	DATE: 5/23/06 TIME: 15:15	RECEIVED BY: (2) Thuyen (BRAGADO)	DATE: 5/23/06 TIME: 1515
RELINQUISHED BY: (2)	DATE: 5/26/6 TIME: 11:54	RECEIVED BY: (3)	DATE: TIME:
RELINQUISHED BY: (3)	DATE: TIME:	RECEIVED BY: (4)	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Julie Lozwick/Kendall Ramniga CRA

RECEIVED FOR LABORATORY BY: Donna Welch 13753
DATE:_____ TIME:_____

1001-00(SOURCE)GN-CO004

L28777

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45736-23

PROJECT NAME: ~~EXELON~~ EXELON - DRESDEN

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hoffmann **PRINTED NAME:** john hoffmann

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Sr-90	Gamma Spec	REMARKS
1	5/23/06	1114	WG-DN-DSP-152-052306-JH-001	WATER	2	X	X	X	
2	"	1336	WG-DN-DSP-157M-052306-JH-002	"	2	X	X	X	
3	"	1550	WG-DN-DSP-157S-052306-JH-003	"	2	X	X	X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: ① John Hoffmann	DATE: 5/23/06 TIME: 18:00	RECEIVED BY: ② Bragado (A. BRAGADO)	DATE: 5-23-06 TIME: 1800
RELINQUISHED BY: ② W J Rund	DATE: 5/26/06 TIME: 11:55	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, marcia sevic

RECEIVED FOR LABORATORY BY: Donna Wild 12758
DATE: _____ TIME: _____

1001-00(SOURCE)GN-CO004

L28777 8 of 127

L28777

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Tedlyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Dresden Generating Plant

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Szyszka

PRINTED NAME: Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	Tritium	Strontium 89/90	Gamma Spec	REMARKS
			WG-DN-DSP-DN-150-052406-JL-054	W	2	X	X	X	
	5/24/06	1225	WG-DN-DSP-DN-151-052406-JL-055	W	2	X	X	X	
		1415	WG-DN-DSP-DN-108-052406-JL-056	W	2	X	X	X	
	↓	1105 ~~1545~~							

TOTAL NUMBER OF CONTAINERS: 6

RELINQUISHED BY: ① Julie Szyszka	DATE: 5/24/06 TIME: 17:40	RECEIVED BY: ② [signature]	DATE: 5-24-06 TIME: 1756
RELINQUISHED BY: ② [signature]	DATE: 5/25/06 TIME: 11:53	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

AIR BILL No.

METHOD OF SHIPMENT:

SAMPLE TEAM: Julie L., Kendall R.

RECEIVED FOR LABORATORY BY: Donna [signature] 12784

DATE: TIME:

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

L28777

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Exelon _Dresden

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hoffman **PRINTED NAME:** john hoffmann

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: tritium	Sr-80/90	Gamma Spec.								REMARKS
1	5/24/06	1137	WG-DN-DSP-126-052406-JH-004	WATER	2	X	X	X								
2	↓	1320	WG-DN-DSP-153-052406-JH-005	↓	↓	↓	↓	↓								

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: ① John Hoffman	DATE: 5/24/06 TIME: 18:30	RECEIVED BY: ② [signature]	DATE: 5-24-06 TIME: 1832
RELINQUISHED BY: ② [signature]	DATE: 5/25/06 TIME: 11:53	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, tim Leo

RECEIVED FOR LABORATORY BY: [signature] 13747
DATE: TIME:

1001-00(SOURCE)GN-CO004

L28777

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Exelon - Dresden

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** john hoffmann

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	PARAMETERS: Sr-89/90	PARAMETERS: Gamma Spec.	REMARKS
1	5/25/06	0640	WG-DN-DSP-154-052506-JH-006	WATER	2	X	X	X	
2		0940	WG-DN-DSP-158M-052506-JH-007						
3		1109	WG-DN-DSP-158S-052506-JH-008						
4		1445	WG-DN-DSP-159M-052506-JH-009						
			TOTAL NUMBER OF CONTAINERS		8				

RELINQUISHED BY: ① [signature]	DATE: 5/25/06 TIME:	RECEIVED BY: ② Paul Fantini	DATE: 5/25/06 TIME: 1805
RELINQUISHED BY: ② [signature]	DATE: 5/26/6 TIME: 11:55	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, Tim Leo

RECEIVED FOR LABORATORY BY: [signature] 13745
DATE: TIME:

1001-00(SOURCE)GN-CO004

L28777 11 of 127

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

5/31/06

ACKNOWLEDGEMENT
This is not an invoice

May 30, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on May 30, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by June 06, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-DSP-DN-105-052306-JL-0	**L28777-1**		**05/23/06:1130**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-106-052306-JL-0	**L28777-2**		**05/23/06:1230**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN107-052306-JL-05	**L28777-3**		**05/23/06:1350**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-152-052306-JH-001	**L28777-4**		**05/23/06:1114**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-157M-052306-JH-002	**L28777-5**		**05/23/06:1336**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-157S-052306-JH-003	L28777-6		05/23/06:1550	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-150-052406-JL-0	L28777-7		05/24/06:1225	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-151-052406-JL-0	L28777-8		05/24/06:1415	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-108-052406-JL-0	L28777-9		05/24/06:1705	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-126-052406-JH-004	L28777-10		05/24/06:1137	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-153-052406-JH-005	L28777-11		05/24/06:1320	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-154-052506-JH-006	L28777-12		05/25/06:0640	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-158M-052506-JH-007	L28777-13		05/25/06:0940	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-158S-052506-JH-008	L28777-14		05/25/06:1109	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-DSP-159M-052506-JH-009	**L28777-15**		**05/25/06:1445**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

End of document

Charles, Rebecca

From: Charles, Rebecca
Sent: Monday, June 05, 2006 6:07 PM
To: 'Larry.Walton@exeloncorp.com'; 'Zigmund.Karpa@exeloncorp.com'; 'Joyce.Tomlinson@exeloncorp.com'
Subject: High results for Dresden tritiums

High notification. These samples are scheduled to be reported tomorrow. I will give you further status in the morning.

L28777-2,WG-DN-DSP-DN-106-052306-JL-052 exceeded flag values for WG,H-3, 2370 pCi/l **HIGH
L28777-3,WG-DN-DSP-DN107-052306-JL-053 exceeded flag values for WG,H-3, 9820 pCi/l **HIGH

Rebecca Charles
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

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Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28777-1 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-1 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-2 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-2 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-3 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By

****
Sample # L28777-3 Containernum 1

Relinquish Date	Received By	
05/30/2006 00:00	099999	Sample Custodian

****
Sample # L28777-3 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****
Sample # L28777-4 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

****
Sample # L28777-4 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****
Sample # L28777-5 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

****
Sample # L28777-5 Containernum 2

Prod	Analyst
GELI	DW

****
Sample # L28777-5 Containernum 2

H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****
Sample # L28777-6 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

****
Sample # L28777-6 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****
Sample # L28777-7 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

****
Sample # L28777-7 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

Internal Chain of Custody

****

Sample # L28777-7 Containernum 2

Relinquish Date			Received By	
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-8 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-8 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-9 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-9 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-10 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-10 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-11 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-11 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-12 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By

Internal Chain of Custody

****

Sample # L28777-12 Containernum 1

Relinquish Date			Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-12 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-13 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-13 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28777-14 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian

****

Sample # L28777-14 Containernum 2

Prod	Analyst
GELI	DW

****
Sample # L28777-14 Containernum 2

H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

****
Sample # L28777-15 Containernum 1

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/30/2006 00:00		099999	Sample Custodian

****
Sample # L28777-15 Containernum 2

Prod	Analyst
GELI	DW
H-3	DW
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
05/30/2006 16:42	099999	Sample Custodian	030854	Donna Webb
05/30/2006 16:43	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 08:59	029728	Lauren Larsen	030854	Donna Webb
06/02/2006 09:00	030854	Donna Webb	099999	Sample Custodian

06/06/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28777

****

L28777-1 **WG** **WG-DN-DSP-DN-105-052306-JL-051**

Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	ILL	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-2 **WG** **WG-DN-DSP-DN-106-052306-JL-052**

Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	ILL	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-3 **WG** **WG-DN-DSP-DN107-052306-JL-053**

Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	ILL	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-4 **WG** **WG-DN-DSP-152-052306-JH-001**

Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	ILL	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-5 **WG** **WG-DN-DSP-157M-052306-JH-002**

Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	ILL	06/01/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28777

L28777-5	**WG**	**WG-DN-DSP-157M-052306-JH-002**		
Count Room	H-3		KOJ	06/02/06
Count Room	SR-90 (FAST)		KOJ	06/06/06

****

L28777-6	**WG**	**WG-DN-DSP-157S-052306-JH-003**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06
Aliquot	GELI		DW	05/30/06
Aliquot	H-3		DW	05/31/06
Aliquot	SR-90 (FAST)		CJF	06/05/06
Count Room	GELI		ILL	06/01/06
Count Room	H-3		KOJ	06/02/06
Count Room	SR-90 (FAST)		KOJ	06/06/06

****

L28777-7	**WG**	**WG-DN-DSP-DN-150-052406-JL-054**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06
Aliquot	GELI		DW	05/30/06
Aliquot	H-3		DW	05/31/06
Aliquot	SR-90 (FAST)		CJF	06/05/06
Count Room	GELI		ILL	06/01/06
Count Room	H-3		KOJ	06/02/06
Count Room	SR-90 (FAST)		KOJ	06/06/06

****

L28777-8	**WG**	**WG-DN-DSP-DN-151-052406-JL-055**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06
Aliquot	GELI		DW	05/30/06
Aliquot	H-3		DW	05/31/06
Aliquot	SR-90 (FAST)		CJF	06/05/06
Count Room	GELI		KPW	06/01/06
Count Room	H-3		KOJ	06/02/06
Count Room	SR-90 (FAST)		KOJ	06/06/06

****

L28777-9	**WG**	**WG-DN-DSP-DN-108-052406-JL-056**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06
Aliquot	GELI		DW	05/30/06
Aliquot	H-3		DW	05/31/06
Aliquot	SR-90 (FAST)		CJF	06/05/06
Count Room	GELI		KPW	06/01/06
Count Room	H-3		KOJ	06/02/06
Count Room	SR-90 (FAST)		KOJ	06/06/06

****

L28777-10	**WG**	**WG-DN-DSP-126-052406-JH-004**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28777

L28777-10	**WG**	**WG-DN-DSP-126-052406-JH-004**	
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	KPW	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-11	**WG**	**WG-DN-DSP-153-052406-JH-005**	
Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	KPW	06/01/06
Count Room	H-3	KOJ	06/02/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-12	**WG**	**WG-DN-DSP-154-052506-JH-006**	
Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	KPW	06/01/06
Count Room	H-3	KOJ	06/03/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-13	**WG**	**WG-DN-DSP-158M-052506-JH-007**	
Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	KPW	06/01/06
Count Room	H-3	KOJ	06/03/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

****

L28777-14	**WG**	**WG-DN-DSP-158S-052506-JH-008**	
Process step	Prod	Analyst	Date
Login		BWILKERSON	05/30/06
Aliquot	GELI	DW	05/30/06
Aliquot	H-3	DW	05/31/06
Aliquot	SR-90 (FAST)	CJF	06/05/06
Count Room	GELI	KPW	06/01/06
Count Room	H-3	KOJ	06/03/06
Count Room	SR-90 (FAST)	KOJ	06/06/06

06/06/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28777

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L28777-15	WG	WG-DN-DSP-159M-052506-JH-009		
Process step	Prod		Analyst	Date
Login			BWILKERSON	05/30/06
Aliquot	GELI		DW	05/30/06
Aliquot	H-3		DW	05/31/06
Aliquot	SR-90	(FAST)	CJF	06/05/06
Count Room	GELI		ILL	06/02/06
Count Room	H-3		KOJ	06/03/06
Count Room	SR-90	(FAST)	KOJ	06/06/06

Analytical Results Summary

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-105-052306-JL-051** Collect Start: 05/23/2006 11:30 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**3.19E+02**	1.17E+02	1.58E+02	pCi/L		10	ml		06/02/06	60	M	+		
TOTAL SR	2018	5.25E-01	6.56E-01	**1.22E+00**	pCi/L		450	ml	05/23/06 11:30	06/06/06	150	M	U		
MN-54	2007	6.59E-01	3.19E+00	**5.38E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
CO-58	2007	9.87E-01	3.36E+00	**5.71E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
FE-59	2007	6.76E-01	7.17E+00	**1.20E+01**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
CO-60	2007	-3.50E-01	3.76E+00	**6.41E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
ZN-65	2007	5.24E+00	7.34E+00	**1.29E+01**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
NB-95	2007	2.38E+00	3.24E+00	**5.61E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
ZR-95	2007	-6.41E+00	6.01E+00	**8.78E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
CS-134	2007	1.56E+00	4.97E+00	**5.70E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
CS-137	2007	6.72E-01	3.49E+00	**5.81E+00**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
BA-140	2007	-5.11E+00	1.76E+01	**2.79E+01**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No
LA-140	2007	1.73E+00	6.45E+00	**1.09E+01**	pCi/L		3556.18	ml	05/23/06 11:30	06/01/06	9001	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-106-052306-JL-052** Collect Start: 05/23/2006 12:30 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**2.37E+03**	2.89E+02	2.34E+02	pCi/L		10	ml		06/02/06	30.23	M	+	High	
TOTAL SR	2018	7.75E-01	7.22E-01	**1.31E+00**	pCi/L		450	ml	05/23/06 12:30	06/06/06	150	M	U		
MN-54	2007	1.19E+00	3.42E+00	**5.83E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
CO-58	2007	-2.51E+00	3.75E+00	**5.74E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
FE-59	2007	3.20E-01	7.23E+00	**1.20E+01**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
CO-60	2007	1.42E+00	3.39E+00	**5.86E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
ZN-65	2007	8.53E+00	7.49E+00	**1.36E+01**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
NB-95	2007	4.23E+00	3.53E+00	**6.32E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
ZR-95	2007	-6.73E+00	6.17E+00	**9.11E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
CS-134	2007	5.33E+00	7.61E+00	**6.48E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
CS-137	2007	4.55E+00	3.46E+00	**6.30E+00**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
BA-140	2007	-1.48E+00	1.73E+01	**2.82E+01**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No
LA-140	2007	2.48E+00	6.47E+00	**1.12E+01**	pCi/L		3601.55	ml	05/23/06 12:30	06/01/06	6901	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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High = Activity concentration exceeds customer reporting value
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H = High recovery

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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN107-052306-JL-053** Collect Start: 05/23/2006 13:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**9.82E+03**	1.03E+03	4.39E+02	pCi/L		10	ml		06/02/06	8.2	M	+	High	
TOTAL SR	2018	2.73E-01	6.10E-01	**1.17E+00**	pCi/L		450	ml	05/23/06 13:50	06/06/06	150	M	U		
MN-54	2007	-8.79E-01	3.08E+00	**4.92E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
CO-58	2007	-1.31E+00	3.20E+00	**5.07E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
FE-59	2007	-5.67E-01	6.44E+00	**1.06E+01**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
CO-60	2007	-3.19E+00	3.07E+00	**4.42E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
ZN-65	2007	7.09E-01	8.31E+00	**1.17E+01**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
NB-95	2007	1.34E+00	3.00E+00	**5.10E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
ZR-95	2007	1.64E+00	5.49E+00	**9.21E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
CS-134	2007	5.30E+00	4.61E+00	**5.81E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
CS-137	2007	-9.18E-01	3.34E+00	**5.43E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
BA-140	2007	4.37E+00	1.71E+01	**2.82E+01**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No
LA-140	2007	-2.61E+00	5.13E+00	**7.96E+00**	pCi/L		3621.76	ml	05/23/06 13:50	06/01/06	9602	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-152-052306-JH-001** Collect Start: 05/23/2006 11:14 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-1.73E+01	9.93E+01	**1.66E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	1.09E-01	7.17E-01	**1.41E+00**	pCi/L		450	ml	05/23/06 11:14	06/06/06	150	M	U		
MN-54	2007	8.34E-01	2.86E+00	**4.84E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
CO-58	2007	-4.10E+00	3.09E+00	**4.47E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
FE-59	2007	9.91E-01	5.97E+00	**1.00E+01**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
CO-60	2007	3.47E-01	2.85E+00	**4.78E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
ZN-65	2007	9.08E+00	6.44E+00	**1.18E+01**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
NB-95	2007	1.42E+00	3.16E+00	**5.32E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
ZR-95	2007	1.41E+00	5.64E+00	**9.39E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
CS-134	2007	2.09E+00	5.78E+00	**5.32E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
CS-137	2007	-7.27E-01	3.00E+00	**4.89E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
BA-140	2007	-4.95E+00	1.57E+01	**2.53E+01**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No
LA-140	2007	4.14E-01	5.55E+00	**9.25E+00**	pCi/L		3625.33	ml	05/23/06 11:14	06/01/06	9000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-157M-052306-JH-002** Collect Start: 05/23/2006 13:36 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-3.42E+01	9.72E+01	**1.64E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	-3.94E-03	8.63E-01	**1.72E+00**	pCi/L		450	ml	05/23/06 13:36	06/06/06	150	M	U		
MN-54	2007	2.81E+00	2.70E+00	**5.00E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
CO-58	2007	-3.83E-01	2.93E+00	**5.03E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
FE-59	2007	3.30E+00	5.63E+00	**1.04E+01**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
CO-60	2007	7.69E-01	2.71E+00	**4.92E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U*		No
ZN-65	2007	1.53E+01	7.03E+00	**1.26E+01**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
NB-95	2007	3.67E+00	2.97E+00	**5.51E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
ZR-95	2007	1.19E+00	5.10E+00	**8.99E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
CS-134	2007	3.03E+00	3.92E+00	**5.98E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
CS-137	2007	-1.11E+00	2.93E+00	**4.99E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
BA-140	2007	-3.17E+00	1.49E+01	**2.51E+01**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No
LA-140	2007	-1.99E+00	4.85E+00	**8.39E+00**	pCi/L		3585.24	ml	05/23/06 13:36	06/01/06	12000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-157S-052306-JH-003** Collect Start: 05/23/2006 15:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-6

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-2.12E+00	9.88E+01	**1.63E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	6.77E-01	6.07E-01	**1.10E+00**	pCi/L		450	ml	05/23/06 15:50	06/06/06	150	M	U		
MN-54	2007	1.97E+00	2.99E+00	**5.19E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
CO-58	2007	-2.08E-01	2.99E+00	**4.94E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
FE-59	2007	5.08E+00	6.61E+00	**1.16E+01**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
CO-60	2007	3.00E+00	3.44E+00	**6.33E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
ZN-65	2007	4.22E+00	7.03E+00	**1.22E+01**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
NB-95	2007	3.19E+00	3.20E+00	**5.57E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
ZR-95	2007	-5.49E+00	5.54E+00	**8.26E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
CS-134	2007	6.54E+00	5.37E+00	**5.25E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
CS-137	2007	4.20E+00	3.99E+00	**5.06E+00**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		Yes
BA-140	2007	2.64E+00	1.57E+01	**2.58E+01**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No
LA-140	2007	1.81E+00	6.28E+00	**1.06E+01**	pCi/L		3535.09	ml	05/23/06 15:50	06/01/06	11016	Sec	U		No

Flag Values
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High = Activity concentration exceeds customer reporting value
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-150-052406-JL-054** Collect Start: 05/24/2006 12:25 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-7

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	7.35E+01	1.03E+02	**1.61E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	-1.82E-01	4.16E-01	**8.55E-01**	pCi/L		450	ml	05/24/06 12:25	06/06/06	150	M	U		
MN-54	2007	7.53E-01	3.25E+00	**5.39E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
CO-58	2007	-1.45E+00	3.19E+00	**5.04E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
FE-59	2007	1.23E+00	6.58E+00	**1.10E+01**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
CO-60	2007	-2.51E-02	3.11E+00	**5.07E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
ZN-65	2007	8.36E+00	7.26E+00	**1.16E+01**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
NB-95	2007	1.15E+00	3.28E+00	**5.52E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
ZR-95	2007	-2.40E+00	6.20E+00	**9.93E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
CS-134	2007	2.72E+00	3.75E+00	**5.60E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
CS-137	2007	1.46E+00	3.17E+00	**5.41E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
BA-140	2007	-2.98E+00	1.64E+01	**2.64E+01**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No
LA-140	2007	-4.15E+00	5.34E+00	**8.05E+00**	pCi/L		3590.9	ml	05/24/06 12:25	06/01/06	9709	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-151-052406-JL-055** Collect Start: 05/24/2006 14:15 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-8

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	9.71E+01	1.05E+02	**1.62E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	-1.54E-01	8.70E-01	**1.75E+00**	pCi/L		450	ml	05/24/06 14:15	06/06/06	150	M	U		
MN-54	2007	1.18E+00	3.09E+00	**5.48E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
CO-58	2007	-1.31E+00	3.20E+00	**5.40E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
FE-59	2007	2.01E+00	5.85E+00	**1.07E+01**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
CO-60	2007	-1.29E+00	2.72E+00	**4.63E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
ZN-65	2007	1.55E+00	6.26E+00	**1.13E+01**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
NB-95	2007	2.37E+00	3.29E+00	**5.96E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
ZR-95	2007	-2.49E+00	5.53E+00	**9.33E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
CS-134	2007	8.08E+00	5.39E+00	**6.08E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
CS-137	2007	1.60E-01	3.11E+00	**5.45E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
BA-140	2007	1.80E+01	1.71E+01	**3.06E+01**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No
LA-140	2007	1.15E+00	5.24E+00	**9.62E+00**	pCi/L		3550.1	ml	05/24/06 14:15	06/01/06	10628	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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High = Activity concentration exceeds customer reporting value
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-DN-108-052406-JL-056** Collect Start: 05/24/2006 17:05 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-9

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.93E+03**	2.44E+02	2.11E+02	pCi/L		10	ml		06/02/06	34.48	M	+		
TOTAL SR	2018	9.85E-01	6.40E-01	**1.12E+00**	pCi/L		450	ml	05/24/06 17:05	06/06/06	150	M	U		
MN-54	2007	2.21E+00	3.00E+00	**5.25E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
CO-58	2007	5.01E-01	3.31E+00	**5.55E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
FE-59	2007	1.85E+00	6.53E+00	**1.11E+01**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
CO-60	2007	-9.56E-02	3.57E+00	**6.10E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
ZN-65	2007	7.94E-02	7.17E+00	**1.19E+01**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
NB-95	2007	9.95E-01	3.18E+00	**5.29E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
ZR-95	2007	-1.58E+00	5.63E+00	**8.93E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
CS-134	2007	3.68E+00	5.62E+00	**5.62E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
CS-137	2007	-4.11E-01	3.34E+00	**5.43E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
BA-140	2007	5.41E+00	1.52E+01	**2.53E+01**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No
LA-140	2007	2.79E+00	5.57E+00	**9.64E+00**	pCi/L		3503.09	ml	05/24/06 17:05	06/01/06	10331	Sec	U		No

Flag Values
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-126-052406-JH-004** Collect Start: 05/24/2006 11:37 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-10

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-4.23E+00	9.83E+01	**1.63E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	-4.93E-01	7.40E-01	**1.55E+00**	pCi/L		450	ml	05/24/06 11:37	06/06/06	150	M	U		
K-40	2007	**6.44E+01**	4.23E+01	4.01E+01	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	+		Yes
MN-54	2007	-7.31E-01	2.90E+00	**4.66E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
CO-58	2007	9.21E-02	3.12E+00	**5.12E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
FE-59	2007	3.06E+00	6.01E+00	**1.03E+01**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
CO-60	2007	-7.76E-01	2.86E+00	**4.54E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
ZN-65	2007	5.83E+00	7.34E+00	**1.11E+01**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
NB-95	2007	3.64E+00	3.22E+00	**5.62E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
ZR-95	2007	-5.30E+00	5.76E+00	**8.95E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
CS-134	2007	5.24E+00	3.99E+00	**5.55E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
CS-137	2007	5.29E+00	3.08E+00	**5.57E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
BA-140	2007	-4.55E+00	1.57E+01	**2.51E+01**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
LA-140	2007	6.74E+00	4.56E+00	**8.59E+00**	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	U		No
AC-228	2007	**6.13E+01**	1.21E+01	1.60E+01	pCi/L		3423.02	ml	05/24/06 11:37	06/01/06	12419	Sec	+		Yes

Flag Values
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-153-052406-JH-005** Collect Start: 05/24/2006 13:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-11

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-3.09E+01	9.38E+01	**1.58E+02**	pCi/L		10	ml		06/02/06	60	M	U		
TOTAL SR	2018	-4.53E-01	8.12E-01	**1.69E+00**	pCi/L		450	ml	05/24/06 13:20	06/06/06	150	M	U		
MN-54	2007	-2.51E+00	2.92E+00	**4.46E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
CO-58	2007	-5.11E-01	3.27E+00	**5.35E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
FE-59	2007	2.66E+00	6.13E+00	**1.06E+01**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
CO-60	2007	2.69E+00	3.77E+00	**6.84E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
ZN-65	2007	7.67E+00	6.67E+00	**1.21E+01**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
NB-95	2007	1.90E+00	3.20E+00	**5.44E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
ZR-95	2007	3.21E+00	5.69E+00	**9.67E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
CS-134	2007	1.22E+00	7.18E+00	**5.55E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
CS-137	2007	1.92E+00	3.32E+00	**5.67E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
BA-140	2007	2.37E+00	1.67E+01	**2.74E+01**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No
LA-140	2007	-2.13E+00	5.22E+00	**8.08E+00**	pCi/L		3482.9	ml	05/24/06 13:20	06/01/06	10371	Sec	U		No

Flag Values
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\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

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Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-154-052506-JH-006** Collect Start: 05/25/2006 06:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-12

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-8.42E+00	9.75E+01	**1.62E+02**	pCi/L		10	ml		06/03/06	60	M	U		
TOTAL SR	2018	-2.43E-01	8.15E-01	**1.66E+00**	pCi/L		450	ml	05/25/06 06:40	06/06/06	150	M	U		
MN-54	2007	1.60E-01	3.25E+00	**5.62E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
CO-58	2007	-3.57E-01	3.29E+00	**5.66E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
FE-59	2007	7.48E-01	6.42E+00	**1.14E+01**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
CO-60	2007	-1.01E+00	3.09E+00	**5.30E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
ZN-65	2007	6.46E+00	7.38E+00	**1.20E+01**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
NB-95	2007	7.28E-01	3.31E+00	**5.80E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
ZR-95	2007	-1.47E+00	5.78E+00	**9.87E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
CS-134	2007	1.00E+01	5.68E+00	**6.93E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U*		No
CS-137	2007	-2.14E+00	3.40E+00	**5.69E+00**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
BA-140	2007	3.95E+00	1.69E+01	**2.90E+01**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No
LA-140	2007	4.72E+00	5.20E+00	**1.00E+01**	pCi/L		3466.66	ml	05/25/06 06:40	06/01/06	11232	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-158M-052506-JH-007** Collect Start: 05/25/2006 09:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-13

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-5.30E+01	9.50E+01	**1.63E+02**	pCi/L		10	ml		06/03/06	60	M	U		
TOTAL SR	2018	-6.30E-01	9.13E-01	**1.92E+00**	pCi/L		450	ml	05/25/06 09:40	06/06/06	150	M	U		
K-40	2007	**1.65E+02**	2.61E+01	3.01E+01	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	+		Yes
MN-54	2007	1.13E+00	1.87E+00	**3.16E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
CO-58	2007	-7.09E-01	1.95E+00	**3.18E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
FE-59	2007	3.37E+00	4.00E+00	**6.85E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
CO-60	2007	1.08E-01	1.96E+00	**3.21E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
ZN-65	2007	5.73E+00	4.83E+00	**7.23E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
NB-95	2007	1.91E+00	1.97E+00	**3.38E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
ZR-95	2007	1.21E-01	3.51E+00	**5.83E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
CS-134	2007	1.01E+01	3.89E+00	**3.66E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U*		No
CS-137	2007	-6.34E-01	2.01E+00	**3.25E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
BA-140	2007	8.99E+00	9.40E+00	**1.60E+01**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No
LA-140	2007	2.09E+00	3.07E+00	**5.26E+00**	pCi/L		3662.21	ml	05/25/06 09:40	06/01/06	36000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-158S-052506-JH-008** Collect Start: 05/25/2006 11:09 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-14

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	6.63E+01	1.01E+02	**1.59E+02**	pCi/L		10	ml		06/03/06	60	M	U		
TOTAL SR	2018	-5.31E-01	7.45E-01	**1.57E+00**	pCi/L		450	ml	05/25/06 11:09	06/06/06	150	M	U		
MN-54	2007	-5.98E-01	2.00E+00	**3.22E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
CO-58	2007	2.59E+00	2.03E+00	**3.49E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
FE-59	2007	-1.57E+00	3.95E+00	**6.38E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
CO-60	2007	-6.55E-01	1.92E+00	**3.06E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
ZN-65	2007	6.95E+00	5.24E+00	**7.85E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
NB-95	2007	-2.43E-01	2.03E+00	**3.30E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
ZR-95	2007	2.24E+00	3.60E+00	**6.04E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
CS-134	2007	1.04E+01	4.49E+00	**3.95E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U*		No
CS-137	2007	-1.13E+00	2.09E+00	**3.37E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
BA-140	2007	8.93E+00	1.01E+01	**1.73E+01**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
LA-140	2007	1.38E+00	3.25E+00	**5.50E+00**	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	U		No
TH-232	2007	**1.58E+01**	6.05E+00	1.20E+01	pCi/L		3593.64	ml	05/25/06 11:09	06/01/06	36000	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/06/06 16:38

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28777

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-159M-052506-JH-009** Collect Start: 05/25/2006 14:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 05/30/2006 % Moisture:
LIMS Number: L28777-15

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**5.31E+02**	1.31E+02	1.62E+02	pCi/L		10	ml		06/03/06	60	M	+		
TOTAL SR	2018	-1.30E-01	7.00E-01	**1.41E+00**	pCi/L		450	ml	05/25/06 14:45	06/06/06	150	M	U		
MN-54	2007	-1.32E+00	3.26E+00	**5.08E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
CO-58	2007	-4.04E+00	4.13E+00	**6.13E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
FE-59	2007	6.79E+00	8.02E+00	**1.43E+01**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
CO-60	2007	3.85E+00	4.50E+00	**8.40E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
ZN-65	2007	1.06E+01	1.07E+01	**1.67E+01**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
NB-95	2007	4.24E+00	3.98E+00	**7.11E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
ZR-95	2007	-8.40E+00	6.83E+00	**9.89E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
CS-134	2007	9.46E+00	9.64E+00	**8.58E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
CS-137	2007	1.80E+00	3.89E+00	**6.70E+00**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
BA-140	2007	1.61E+01	2.03E+01	**3.52E+01**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No
LA-140	2007	7.64E-01	6.57E+00	**1.10E+01**	pCi/L		3589.89	ml	05/25/06 14:45	06/02/06	7301	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28777

6/6/2006 4:42:01PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4066-1	H-3	WO	06/02/2006 11:04	< 1.660E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4066-2	H-3	WO	06/02/2006 12:08	5.05E+002	5.810E+02	pCi/Total	115.1	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4066-3 L28777-1	H-3	WG	06/02/2006 12:25	3.190E+02	3.440E+02	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28777

6/6/2006 4:42:01PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28777 **H-3**

Associated Samples for **WG4066**

SAMPLENUM	CLIENTID
L28777-1	WG-DN-DSP-DN-105-052306-JL-051
L28777-2	WG-DN-DSP-DN-106-052306-JL-052
L28777-3	WG-DN-DSP-DN107-052306-JL-053
L28777-4	WG-DN-DSP-152-052306-JH-001
L28777-5	WG-DN-DSP-157M-052306-JH-002
L28777-6	WG-DN-DSP-157S-052306-JH-003
L28777-7	WG-DN-DSP-DN-150-052406-JL-054
L28777-8	WG-DN-DSP-DN-151-052406-JL-055
L28777-9	WG-DN-DSP-DN-108-052406-JL-056
L28777-10	WG-DN-DSP-126-052406-JH-004
L28777-11	WG-DN-DSP-153-052406-JH-005
L28777-12	WG-DN-DSP-154-052506-JH-006
L28777-13	WG-DN-DSP-158M-052506-JH-007
L28777-14	WG-DN-DSP-158S-052506-JH-008
L28777-15	WG-DN-DSP-159M-052506-JH-009

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L28777 46 of 127

QC Summary Report for L28777

6/6/2006 4:42:01PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4092-1	TOTAL SR	WO	06/06/2006 16:43	< 7.170E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4092-2	TOTAL SR	WO	06/06/2006 16:43	5.84E+001	6.090E+01	pCi/Total	104.3	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4092-3 L28777-1	TOTAL SR	WG	06/06/2006 16:43	< 1.220E+00	< 1.250E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L28777 47 of 127

QC Summary Report for L28777

6/6/2006 4:42:01PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28777 **SR-90 (FAST)**

Associated Samples for **WG4092**

SAMPLENUM	CLIENTID
L28777-1	WG-DN-DSP-DN-105-052306-JL-051
L28777-2	WG-DN-DSP-DN-106-052306-JL-052
L28777-3	WG-DN-DSP-DN107-052306-JL-053
L28777-4	WG-DN-DSP-152-052306-JH-001
L28777-5	WG-DN-DSP-157M-052306-JH-002
L28777-6	WG-DN-DSP-157S-052306-JH-003
L28777-7	WG-DN-DSP-DN-150-052406-JL-054
L28777-8	WG-DN-DSP-DN-151-052406-JL-055
L28777-9	WG-DN-DSP-DN-108-052406-JL-056
L28777-10	WG-DN-DSP-126-052406-JH-004
L28777-11	WG-DN-DSP-153-052406-JH-005
L28777-12	WG-DN-DSP-154-052506-JH-006
L28777-13	WG-DN-DSP-158M-052506-JH-007
L28777-14	WG-DN-DSP-158S-052506-JH-008
L28777-15	WG-DN-DSP-159M-052506-JH-009

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L28777 48 of 127

Raw Data

Raw Data Sheet (rawdata)
Jun 06 2006, 04:53 pm

Work Order: *L28777* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28777-1		H-3					0		02-jun-06 13:29	LS7	191	60	1.63	60	.219		DW
WG-DN-DSP-DN-105-05230				10 ml													
Activity: 3.19E+02 * Error: 1.17E+02				MDC: 1.58E+02													
L28777-2		H-3					0		02-jun-06 14:33	LS7	380	30.23	1.63	60	.208		DW
WG-DN-DSP-DN-106-05230				10 ml													
Activity: 2.37E+03 * Error: 2.89E+02				MDC: 2.34E+02													
L28777-3		H-3					0		02-jun-06 15:07	LS7	394	8.2	1.63	60	.213		DW
WG-DN-DSP-DN107-052306				10 ml													
Activity: 9.82E+03 * Error: 1.03E+03				MDC: 4.39E+02													
L28777-4		H-3					0		02-jun-06 15:18	LS7	93	60	1.63	60	.209		DW
WG-DN-DSP-152-052306-J				10 ml													
Activity: -1.73E+01 Error: 9.93E+01				MDC: 1.66E+02 *													
L28777-5		H-3					0		02-jun-06 16:22	LS7	88	60	1.63	60	.211		DW
WG-DN-DSP-157M-052306-				10 ml													
Activity: -3.42E+01 Error: 9.72E+01				MDC: 1.64E+02 *													
L28777-6		H-3					0		02-jun-06 17:26	LS7	97	60	1.63	60	.213		DW
WG-DN-DSP-157S-052306-				10 ml													
Activity: -2.12E+00 Error: 9.88E+01				MDC: 1.63E+02 *													
L28777-7		H-3					0		02-jun-06 18:30	LS7	119	60	1.63	60	.215		DW
WG-DN-DSP-DN-150-05240				10 ml													
Activity: 7.35E+01 Error: 1.03E+02				MDC: 1.61E+02 *													
L28777-8		H-3					0		02-jun-06 19:34	LS7	125	60	1.63	60	.214		DW
WG-DN-DSP-DN-151-05240				10 ml													
Activity: 9.71E+01 Error: 1.05E+02				MDC: 1.62E+02 *													
L28777-9		H-3					0		02-jun-06 21:42	LS7	376	34.48	1.63	60	.216		DW
WG-DN-DSP-DN-108-05240				10 ml													
Activity: 1.93E+03 * Error: 2.44E+02				MDC: 2.11E+02													
L28777-10		H-3					0		02-jun-06 22:20	LS7	97	60	1.63	60	.213		DW
WG-DN-DSP-126-052406-J				10 ml													
Activity: -4.23E+00 Error: 9.83E+01				MDC: 1.63E+02 *													
L28777-11		H-3					0		02-jun-06 23:23	LS7	89	60	1.63	60	.219		DW
WG-DN-DSP-153-052406-J				10 ml													
Activity: -3.09E+01 Error: 9.38E+01				MDC: 1.58E+02 *													
L28777-12		H-3					0		03-jun-06 00:27	LS7	95	60	1.63	60	.214		DW
WG-DN-DSP-154-052506-J				10 ml													
Activity: -8.42E+00 Error: 9.75E+01				MDC: 1.62E+02 *													
L28777-13		H-3					0		03-jun-06 01:31	LS7	83	60	1.63	60	.213		DW
WG-DN-DSP-158M-052506-				10 ml													
Activity: -5.3E+01 Error: 9.5E+01				MDC: 1.63E+02 *													
L28777-14		H-3					0		03-jun-06 02:34	LS7	117	60	1.63	60	.218		DW
WG-DN-DSP-158S-052506-				10 ml													
Activity: 6.63E+01 Error: 1.01E+02				MDC: 1.59E+02 *													
L28777-15		H-3					0		03-jun-06 03:38	LS7	249	60	1.63	60	.214		DW
WG-DN-DSP-159M-052506-				10 ml													
Activity: 5.31E+02 * Error: 1.31E+02				MDC: 1.62E+02													

Work Order: *L28777* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28777-1		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	X2A	119	150	264	400	.354	.999	CJF
WG-DN-DSP-DN-105-05230			11:30	450 ml	10:30			71.77	16:43								
Activity: 5.25E-01 Error: 6.56E-01 MDC: 1.22E+00 *																	
L28777-2		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	X2B	137	150	289	400	.345	.999	CJF
WG-DN-DSP-DN-106-05230			12:30	450 ml	10:30			71.51	16:43								
Activity: 7.75E-01 Error: 7.22E-01 MDC: 1.31E+00 *																	
L28777-3		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	X2C	115	150	277	400	.344	.999	CJF
WG-DN-DSP-DN107-052306			13:50	450 ml	10:30			79.03	16:43								
Activity: 2.73E-01 Error: 6.1E-01 MDC: 1.17E+00 *																	
L28777-4		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	X2D	119	150	307	400	.343	.999	CJF
WG-DN-DSP-152-052306-J			11:14	450 ml	10:30			69.09	16:43								
Activity: 1.09E-01 Error: 7.17E-01 MDC: 1.41E+00 *																	
L28777-5		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	X3A	136	150	363	400	.335	.999	CJF
WG-DN-DSP-157M-052306-			13:36	450 ml	10:30			63.17	16:43								
Activity: -3.94E-03 Error: 8.63E-01 MDC: 1.72E+00 *																	
L28777-6		TOTAL SR	23-may-06		06-jun-06		0		06-jun-06	Y1B	134	150	279	400	.351	.999	CJF
WG-DN-DSP-157S-052306-			15:50	450 ml	10:30			82.53	16:48								
Activity: 6.77E-01 Error: 6.07E-01 MDC: 1.1E+00 *																	
L28777-7		TOTAL SR	24-may-06		06-jun-06		0		06-jun-06	Y1C	102	150	300	400	.345	.999	CJF
WG-DN-DSP-DN-150-05240			12:25	450 ml	10:30			111.83	16:48								
Activity: -1.82E-01 Error: 4.16E-01 MDC: 8.55E-01 *																	
L28777-8		TOTAL SR	24-may-06		06-jun-06		0		06-jun-06	Y1D	110	150	305	400	.362	.999	CJF
WG-DN-DSP-DN-151-05240			14:15	450 ml	10:30			52.42	16:48								
Activity: -1.54E-01 Error: 8.7E-01 MDC: 1.75E+00 *																	
L28777-9		TOTAL SR	24-may-06		06-jun-06		0		06-jun-06	Y2A	147	150	280	400	.349	.999	CJF
WG-DN-DSP-DN-108-05240			17:05	450 ml	10:30			81.72	16:48								
Activity: 9.85E-01 Error: 6.4E-01 MDC: 1.12E+00 *																	
L28777-10		TOTAL SR	24-may-06		06-jun-06		0		06-jun-06	Y2B	102	150	315	400	.356	.999	CJF
WG-DN-DSP-126-052406-J			11:37	450 ml	10:30			61.29	16:48								
Activity: -4.93E-01 Error: 7.4E-01 MDC: 1.55E+00 *																	
L28777-11		TOTAL SR	24-may-06		06-jun-06		0		06-jun-06	Y2C	88	150	268	400	.35	.999	CJF
WG-DN-DSP-153-052406-J			13:20	450 ml	10:30			52.69	16:48								
Activity: -4.53E-01 Error: 8.12E-01 MDC: 1.69E+00 *																	
L28777-12		TOTAL SR	25-may-06		06-jun-06		0		06-jun-06	Y3A	102	150	291	400	.347	.999	CJF
WG-DN-DSP-154-052506-J			06:40	450 ml	10:30			56.45	16:48								
Activity: -2.43E-01 Error: 8.15E-01 MDC: 1.66E+00 *																	
L28777-13		TOTAL SR	25-may-06		06-jun-06		0		06-jun-06	Y1A	89	150	279	400	.341	.999	CJF
WG-DN-DSP-158M-052506-			09:40	450 ml	10:30			48.66	16:48								
Activity: -6.3E-01 Error: 9.13E-01 MDC: 1.92E+00 *																	
L28777-14		TOTAL SR	25-may-06		06-jun-06		0		06-jun-06	Y3B	93	150	292	400	.346	.999	CJF
WG-DN-DSP-158S-052506-			11:09	450 ml	10:30			59.95	16:48								
Activity: -5.31E-01 Error: 7.45E-01 MDC: 1.57E+00 *																	
L28777-15		TOTAL SR	25-may-06		06-jun-06		0		06-jun-06	Y3D	94	150	262	400	.352	.999	CJF
WG-DN-DSP-159M-052506-			14:45	450 ml	10:30			62.10	16:48								
Activity: -1.3E-01 Error: 7E-01 MDC: 1.41E+00 *																	

Sec. Review: KDS Analyst: DM LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 11:23:27.80
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 1-JUN-2006 08:53:14.38

LIMS No., Customer Name, Client ID: L28777-1 WG DRESDEN

Sample ID : 04L28777-1
Sample Type : WG
Quantity : 3.55620E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 11:30:00.
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 02:30:02.13
Live time : 0 02:30:00.59

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	140.10*	26	201	1.19	280.78	1.82E+00	2.87E-03	101.3	2.95E+00
2	1	198.33*	56	179	1.73	397.25	1.68E+00	6.21E-03	46.1	3.00E+00
3	1	238.60*	1	98	1.14	477.81	1.52E+00	8.83E-05	*****	5.13E+00
4	1	295.12*	26	117	1.11	590.87	1.32E+00	2.85E-03	79.0	1.86E+00
5	1	351.74*	55	95	1.84	704.09	1.17E+00	6.07E-03	41.7	1.55E+00
6	1	582.84*	20	52	2.41	1166.29	8.00E-01	2.19E-03	77.4	6.79E+00
7	1	596.08	31	43	1.61	1192.77	7.86E-01	3.41E-03	42.3	1.10E+00
8	1	609.30*	66	94	1.80	1219.21	7.73E-01	7.35E-03	34.1	4.26E+00
9	1	1460.62*	12	27	2.66	2921.43	3.92E-01	1.37E-03	111.7	9.98E-01
10	1	1763.92*	22	5	3.21	3527.74	3.43E-01	2.46E-03	33.4	1.51E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	12	10.67*	3.921E-01	2.489E+01	2.489E+01	223.34
TH-228	238.63	1	44.60*	1.520E+00	9.896E-02	9.984E-02	4426.87
	240.98	------	3.95	1.511E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28777-1

Acquisition date : 1-JUN-2006 08:53:14

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.489E+01	2.489E+01	5.558E+01	223.34	
TH-228	1.91Y	1.01	9.896E-02	9.984E-02	442.0E-02	4426.87	
			---------	---------			
	Total Activity :		2.499E+01	2.499E+01			
	Grand Total Activity :		2.499E+01	2.499E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28777-1

Acquisition date : 1-JUN-2006 08:53:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	140.10	26	201	1.19	280.78	277	8	2.87E-03	****	1.82E+00	
1	198.33	56	179	1.73	397.25	393	9	6.21E-03	92.1	1.68E+00	
1	295.12	26	117	1.11	590.87	587	8	2.85E-03	****	1.32E+00	
1	351.74	55	95	1.84	704.09	698	13	6.07E-03	83.4	1.17E+00	
1	582.84	20	52	2.41	1166.29	1164	11	2.19E-03	****	8.00E-01	T
1	596.08	31	43	1.61	1192.77	1188	9	3.41E-03	84.5	7.86E-01	
1	609.30	66	94	1.80	1219.21	1214	14	7.35E-03	68.1	7.73E-01	
1	1763.92	22	5	3.21	3527.74	3522	11	2.46E-03	66.7	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.489E+01	2.489E+01	5.558E+01	223.34	
TH-228	1.91Y	1.01	9.896E-02	9.984E-02	442.0E-02	4426.87	
	Total Activity :		2.499E+01	2.499E+01			

Grand Total Activity : 2.499E+01 2.499E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.489E+01	5.558E+01	5.747E+01	0.000E+00	0.433
TH-228	9.984E-02	4.420E+00	9.150E+00	0.000E+00	0.011

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	7.222E+00		2.810E+01	4.676E+01	0.000E+00	0.154

NA-24	3.782E-02	3.656E-02	Half-Life too short		
CR-51	3.016E+00	3.221E+01	5.266E+01	0.000E+00	0.057
MN-54	6.589E-01	3.194E+00	5.377E+00	0.000E+00	0.123
CO-57	-7.713E-01	2.817E+00	4.625E+00	0.000E+00	-0.167
CO-58	9.869E-01	3.363E+00	5.714E+00	0.000E+00	0.173
FE-59	6.762E-01	7.167E+00	1.197E+01	0.000E+00	0.056
CO-60	-3.495E-01	3.758E+00	6.405E+00	0.000E+00	-0.055
ZN-65	5.244E+00	7.344E+00	1.293E+01	0.000E+00	0.406
SE-75	-3.211E+00	4.317E+00	6.854E+00	0.000E+00	-0.468
SR-85	1.323E+01	4.224E+00	7.918E+00	0.000E+00	1.671
Y-88	-7.567E-01	3.590E+00	5.729E+00	0.000E+00	-0.132
NB-94	1.692E+00	3.400E+00	5.755E+00	0.000E+00	0.294
NB-95	2.375E+00	3.241E+00	5.606E+00	0.000E+00	0.424
ZR-95	-6.406E+00	6.010E+00	8.775E+00	0.000E+00	-0.730
MO-99	-1.346E+02	2.224E+02	3.420E+02	0.000E+00	-0.394
RU-103	2.357E+00	3.594E+00	6.122E+00	0.000E+00	0.385
RU-106	-6.211E+00	2.962E+01	4.655E+01	0.000E+00	-0.133
AG-110m	5.064E-01	3.244E+00	5.393E+00	0.000E+00	0.094
SN-113	3.210E+00	4.064E+00	7.054E+00	0.000E+00	0.455
SB-124	1.103E+00	6.869E+00	5.355E+00	0.000E+00	0.206
SB-125	4.400E+00	9.211E+00	1.562E+01	0.000E+00	0.282
TE-129M	4.427E+01	4.266E+01	7.452E+01	0.000E+00	0.594
I-131	-1.766E+00	6.506E+00	1.067E+01	0.000E+00	-0.165
BA-133	2.888E+00	4.725E+00	7.067E+00	0.000E+00	0.409
CS-134	1.564E+00	4.973E+00	5.704E+00	0.000E+00	0.274
CS-136	-3.787E+00	4.641E+00	7.087E+00	0.000E+00	-0.534
CS-137	6.715E-01	3.485E+00	5.807E+00	0.000E+00	0.116
CE-139	-3.185E-01	3.070E+00	4.988E+00	0.000E+00	-0.064
BA-140	-5.105E+00	1.761E+01	2.787E+01	0.000E+00	-0.183
LA-140	1.726E+00	6.450E+00	1.090E+01	0.000E+00	0.158
CE-141	7.204E+00	6.624E+00	9.938E+00	0.000E+00	0.725
CE-144	-1.260E+01	2.414E+01	3.468E+01	0.000E+00	-0.363
EU-152	-4.691E+00	1.203E+01	1.598E+01	0.000E+00	-0.294
EU-154	-2.500E+00	5.883E+00	9.596E+00	0.000E+00	-0.261
RA-226	-2.028E+01	7.740E+01	1.264E+02	0.000E+00	-0.160
AC-228	2.719E-01	1.310E+01	2.252E+01	0.000E+00	0.012
TH-232	2.711E-01	1.306E+01	2.245E+01	0.000E+00	0.012
U-235	1.458E+01	2.587E+01	3.772E+01	0.000E+00	0.387
U-238	-5.852E+01	3.815E+02	6.123E+02	0.000E+00	-0.096
AM-241	-2.650E+01	2.693E+01	4.238E+01	0.000E+00	-0.625

```
A,04L28777-1       ,06/01/2006 11:23,05/23/2006 11:30,   3.556E+00,L28777-1 WG DR
B,04L28777-1       ,LIBD                ,03/14/2005 09:04,0435L090804
C,K-40     ,YES,    2.489E+01,   5.558E+01,   5.747E+01,,     0.433
C,TH-228   ,YES,    9.984E-02,   4.420E+00,   9.150E+00,,     0.011
C,BE-7     ,NO ,    7.222E+00,   2.810E+01,   4.676E+01,,     0.154
C,CR-51    ,NO ,    3.016E+00,   3.221E+01,   5.266E+01,,     0.057
C,MN-54    ,NO ,    6.589E-01,   3.194E+00,   5.377E+00,,     0.123
C,CO-57    ,NO ,   -7.713E-01,   2.817E+00,   4.625E+00,,    -0.167
C,CO-58    ,NO ,    9.869E-01,   3.363E+00,   5.714E+00,,     0.173
C,FE-59    ,NO ,    6.762E-01,   7.167E+00,   1.197E+01,,     0.056
C,CO-60    ,NO ,   -3.495E-01,   3.758E+00,   6.405E+00,,    -0.055
C,ZN-65    ,NO ,    5.244E+00,   7.344E+00,   1.293E+01,,     0.406
C,SE-75    ,NO ,   -3.211E+00,   4.317E+00,   6.854E+00,,    -0.468
C,SR-85    ,NO ,    1.323E+01,   4.224E+00,   7.918E+00,,     1.671
C,Y-88     ,NO ,   -7.567E-01,   3.590E+00,   5.729E+00,,    -0.132
C,NB-94    ,NO ,    1.692E+00,   3.400E+00,   5.755E+00,,     0.294
C,NB-95    ,NO ,    2.375E+00,   3.241E+00,   5.606E+00,,     0.424
C,ZR-95    ,NO ,   -6.406E+00,   6.010E+00,   8.775E+00,,    -0.730
C,MO-99    ,NO ,   -1.346E+02,   2.224E+02,   3.420E+02,,    -0.394
C,RU-103   ,NO ,    2.357E+00,   3.594E+00,   6.122E+00,,     0.385
C,RU-106   ,NO ,   -6.211E+00,   2.962E+01,   4.655E+01,,    -0.133
C,AG-110m  ,NO ,    5.064E-01,   3.244E+00,   5.393E+00,,     0.094
C,SN-113   ,NO ,    3.210E+00,   4.064E+00,   7.054E+00,,     0.455
C,SB-124   ,NO ,    1.103E+00,   6.869E+00,   5.355E+00,,     0.206
C,SB-125   ,NO ,    4.400E+00,   9.211E+00,   1.562E+01,,     0.282
C,TE-129M  ,NO ,    4.427E+01,   4.266E+01,   7.452E+01,,     0.594
C,I-131    ,NO ,   -1.766E+00,   6.506E+00,   1.067E+01,,    -0.165
C,BA-133   ,NO ,    2.888E+00,   4.725E+00,   7.067E+00,,     0.409
C,CS-134   ,NO ,    1.564E+00,   4.973E+00,   5.704E+00,,     0.274
C,CS-136   ,NO ,   -3.787E+00,   4.641E+00,   7.087E+00,,    -0.534
C,CS-137   ,NO ,    6.715E-01,   3.485E+00,   5.807E+00,,     0.116
C,CE-139   ,NO ,   -3.185E-01,   3.070E+00,   4.988E+00,,    -0.064
C,BA-140   ,NO ,   -5.105E+00,   1.761E+01,   2.787E+01,,    -0.183
C,LA-140   ,NO ,    1.726E+00,   6.450E+00,   1.090E+01,,     0.158
C,CE-141   ,NO ,    7.204E+00,   6.624E+00,   9.938E+00,,     0.725
C,CE-144   ,NO ,   -1.260E+01,   2.414E+01,   3.468E+01,,    -0.363
C,EU-152   ,NO ,   -4.691E+00,   1.203E+01,   1.598E+01,,    -0.294
C,EU-154   ,NO ,   -2.500E+00,   5.883E+00,   9.596E+00,,    -0.261
C,RA-226   ,NO ,   -2.028E+01,   7.740E+01,   1.264E+02,,    -0.160
C,AC-228   ,NO ,    2.719E-01,   1.310E+01,   2.252E+01,,     0.012
C,TH-232   ,NO ,    2.711E-01,   1.306E+01,   2.245E+01,,     0.012
C,U-235    ,NO ,    1.458E+01,   2.587E+01,   3.772E+01,,     0.387
C,U-238    ,NO ,   -5.852E+01,   3.815E+02,   6.123E+02,,    -0.096
C,AM-241   ,NO ,   -2.650E+01,   2.693E+01,   4.238E+01,,    -0.625
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 10:48:26.76
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 1-JUN-2006 08:53:17.70

LIMS No., Customer Name, Client ID: L28777-2 WG DRESDEN

Sample ID : 07L28777-2
Sample Type : WG
Quantity : 3.60160E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 12:30:00.
Geometry : 0735L090904
BKGFILE : 07BG050506MT
Real Time : 0 01:55:02.58
Live time : 0 01:55:01.19

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	65.68*	60	215	1.57	132.20	7.01E-01	8.63E-03	49.2	3.74E+00
2	5	241.45	61	125	1.83	483.87	1.80E+00	8.81E-03	40.9	3.35E+00
3	1	351.79*	56	156	1.60	704.60	1.43E+00	8.06E-03	50.5	9.91E-01
4	1	596.21	40	47	1.98	1193.51	9.96E-01	5.73E-03	36.9	1.11E+00
5	1	609.33*	79	53	1.93	1219.76	9.81E-01	1.14E-02	25.1	1.87E+00
6	1	1409.07	14	11	1.55	2819.00	5.29E-01	2.06E-03	56.3	1.29E+00
7	1	1765.03*	12	0	2.29	3530.59	4.54E-01	1.70E-03	48.3	5.90E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28777-2

Acquisition date : 1-JUN-2006 08:53:17

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28777-2 Acquisition date : 1-JUN-2006 08:53:17

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	65.68	60	215	1.57	132.20	129	10	8.63E-03	98.4	7.01E-01	
5	241.45	61	125	1.83	483.87	474	19	8.81E-03	81.7	1.80E+00	T
1	351.79	56	156	1.60	704.60	700	14	8.06E-03	****	1.43E+00	
1	596.21	40	47	1.98	1193.51	1189	11	5.73E-03	73.8	9.96E-01	
1	609.33	79	53	1.93	1219.76	1213	15	1.14E-02	50.3	9.81E-01	
1	1409.07	14	11	1.55	2819.00	2809	14	2.06E-03	****	5.29E-01	
1	1765.03	12	0	2.29	3530.59	3522	14	1.70E-03	96.7	4.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 7
Number of unidentified lines 6
Number of lines tentatively identified by NID 1 14.29%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.237E+01		3.116E+01	5.306E+01	0.000E+00	0.233
NA-24	-1.815E-02		3.397E-02	Half-Life too short		
K-40	1.729E+01		4.638E+01	9.107E+01	0.000E+00	0.190
CR-51	-2.377E+01		3.431E+01	5.324E+01	0.000E+00	-0.446
MN-54	1.191E+00		3.416E+00	5.827E+00	0.000E+00	0.204
CO-57	-2.798E+00		2.925E+00	4.701E+00	0.000E+00	-0.595
CO-58	-2.505E+00		3.748E+00	5.742E+00	0.000E+00	-0.436
FE-59	3.201E-01		7.226E+00	1.199E+01	0.000E+00	0.027
CO-60	1.424E+00		3.385E+00	5.860E+00	0.000E+00	0.243
ZN-65	8.529E+00		7.490E+00	1.359E+01	0.000E+00	0.628
SE-75	-8.627E-01		4.264E+00	6.929E+00	0.000E+00	-0.125
SR-85	1.693E+01		4.106E+00	8.108E+00	0.000E+00	2.088
Y-88	-6.403E+00		4.182E+00	5.296E+00	0.000E+00	-1.209
NB-94	-1.233E+00		3.198E+00	5.114E+00	0.000E+00	-0.241
NB-95	4.233E+00		3.529E+00	6.321E+00	0.000E+00	0.670
ZR-95	-6.726E+00		6.167E+00	9.105E+00	0.000E+00	-0.739
MO-99	-3.665E+01		2.295E+02	3.714E+02	0.000E+00	-0.099
RU-103	2.636E+00		3.703E+00	6.418E+00	0.000E+00	0.411
RU-106	1.434E+01		3.065E+01	5.023E+01	0.000E+00	0.286
AG-110m	-1.604E+00		3.251E+00	5.187E+00	0.000E+00	-0.309
SN-113	7.383E-03		4.310E+00	7.083E+00	0.000E+00	0.001

SB-124	-5.684E-01	8.110E+00	5.742E+00	0.000E+00	-0.099
SB-125	1.986E+00	8.395E+00	1.392E+01	0.000E+00	0.143
TE-129M	3.030E+01	4.431E+01	7.503E+01	0.000E+00	0.404
I-131	1.446E+00	6.685E+00	1.120E+01	0.000E+00	0.129
BA-133	4.264E+00	5.189E+00	7.803E+00	0.000E+00	0.547
CS-134	5.334E+00	7.606E+00	6.484E+00	0.000E+00	0.823
CS-136	-2.129E+00	5.460E+00	8.571E+00	0.000E+00	-0.248
CS-137	4.550E+00	3.463E+00	6.295E+00	0.000E+00	0.723
CE-139	4.816E-01	3.157E+00	5.208E+00	0.000E+00	0.092
BA-140	-1.482E+00	1.726E+01	2.822E+01	0.000E+00	-0.053
LA-140	2.479E+00	6.465E+00	1.115E+01	0.000E+00	0.222
CE-141	-7.903E+00	6.163E+00	9.646E+00	0.000E+00	-0.819
CE-144	-4.233E+01	2.345E+01	3.607E+01	0.000E+00	-1.174
EU-152	-4.604E+00	1.156E+01	1.637E+01	0.000E+00	-0.281
EU-154	-4.537E+00	6.085E+00	9.870E+00	0.000E+00	-0.460
RA-226	5.048E+01	7.609E+01	1.311E+02	0.000E+00	0.385
AC-228	-2.297E+00	1.296E+01	2.200E+01	0.000E+00	-0.104
TH-228	6.730E+00	6.852E+00	1.085E+01	0.000E+00	0.621
TH-232	-2.290E+00	1.292E+01	2.194E+01	0.000E+00	-0.104
U-235	-2.398E+01	2.409E+01	3.826E+01	0.000E+00	-0.627
U-238	7.975E+01	3.935E+02	6.587E+02	0.000E+00	0.121
AM-241	-2.657E+01	2.605E+01	3.884E+01	0.000E+00	-0.684

A,07L28777-2 ,06/01/2006 10:48,05/23/2006 12:30, 3.602E+00,L28777-2 WG DR
B,07L28777-2 ,LIBD ,06/23/2005 07:26,0735L090904

C,BE-7	,NO ,	1.237E+01,	3.116E+01,	5.306E+01,,	0.233
C,K-40	,NO ,	1.729E+01,	4.638E+01,	9.107E+01,,	0.190
C,CR-51	,NO ,	-2.377E+01,	3.431E+01,	5.324E+01,,	-0.446
C,MN-54	,NO ,	1.191E+00,	3.416E+00,	5.827E+00,,	0.204
C,CO-57	,NO ,	-2.798E+00,	2.925E+00,	4.701E+00,,	-0.595
C,CO-58	,NO ,	-2.505E+00,	3.748E+00,	5.742E+00,,	-0.436
C,FE-59	,NO ,	3.201E-01,	7.226E+00,	1.199E+01,,	0.027
C,CO-60	,NO ,	1.424E+00,	3.385E+00,	5.860E+00,,	0.243
C,ZN-65	,NO ,	8.529E+00,	7.490E+00,	1.359E+01,,	0.628
C,SE-75	,NO ,	-8.627E-01,	4.264E+00,	6.929E+00,,	-0.125
C,SR-85	,NO ,	1.693E+01,	4.106E+00,	8.108E+00,,	2.088
C,Y-88	,NO ,	-6.403E+00,	4.182E+00,	5.296E+00,,	-1.209
C,NB-94	,NO ,	-1.233E+00,	3.198E+00,	5.114E+00,,	-0.241
C,NB-95	,NO ,	4.233E+00,	3.529E+00,	6.321E+00,,	0.670
C,ZR-95	,NO ,	-6.726E+00,	6.167E+00,	9.105E+00,,	-0.739
C,MO-99	,NO ,	-3.665E+01,	2.295E+02,	3.714E+02,,	-0.099
C,RU-103	,NO ,	2.636E+00,	3.703E+00,	6.418E+00,,	0.411
C,RU-106	,NO ,	1.434E+01,	3.065E+01,	5.023E+01,,	0.286
C,AG-110m	,NO ,	-1.604E+00,	3.251E+00,	5.187E+00,,	-0.309
C,SN-113	,NO ,	7.383E-03,	4.310E+00,	7.083E+00,,	0.001
C,SB-124	,NO ,	-5.684E-01,	8.110E+00,	5.742E+00,,	-0.099
C,SB-125	,NO ,	1.986E+00,	8.395E+00,	1.392E+01,,	0.143
C,TE-129M	,NO ,	3.030E+01,	4.431E+01,	7.503E+01,,	0.404
C,I-131	,NO ,	1.446E+00,	6.685E+00,	1.120E+01,,	0.129
C,BA-133	,NO ,	4.264E+00,	5.189E+00,	7.803E+00,,	0.547
C,CS-134	,NO ,	5.334E+00,	7.606E+00,	6.484E+00,,	0.823
C,CS-136	,NO ,	-2.129E+00,	5.460E+00,	8.571E+00,,	-0.248
C,CS-137	,NO ,	4.550E+00,	3.463E+00,	6.295E+00,,	0.723
C,CE-139	,NO ,	4.816E-01,	3.157E+00,	5.208E+00,,	0.092
C,BA-140	,NO ,	-1.482E+00,	1.726E+01,	2.822E+01,,	-0.053
C,LA-140	,NO ,	2.479E+00,	6.465E+00,	1.115E+01,,	0.222
C,CE-141	,NO ,	-7.903E+00,	6.163E+00,	9.646E+00,,	-0.819
C,CE-144	,NO ,	-4.233E+01,	2.345E+01,	3.607E+01,,	-1.174
C,EU-152	,NO ,	-4.604E+00,	1.156E+01,	1.637E+01,,	-0.281
C,EU-154	,NO ,	-4.537E+00,	6.085E+00,	9.870E+00,,	-0.460
C,RA-226	,NO ,	5.048E+01,	7.609E+01,	1.311E+02,,	0.385
C,AC-228	,NO ,	-2.297E+00,	1.296E+01,	2.200E+01,,	-0.104
C,TH-228	,NO ,	6.730E+00,	6.852E+00,	1.085E+01,,	0.621
C,TH-232	,NO ,	-2.290E+00,	1.292E+01,	2.194E+01,,	-0.104
C,U-235	,NO ,	-2.398E+01,	2.409E+01,	3.826E+01,,	-0.627
C,U-238	,NO ,	7.975E+01,	3.935E+02,	6.587E+02,,	0.121
C,AM-241	,NO ,	-2.657E+01,	2.605E+01,	3.884E+01,,	-0.684

Sec. Review: 120 Analyst: 127 LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 13:24:21.98
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 1-JUN-2006 10:44:10.58

LIMS No., Customer Name, Client ID: L28777-3 WG EXELON/DRESDEN

Sample ID : 13L28777-3
Sample Type : wg
Quantity : 3.62180E+00 l
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 13:50:00.
Geometry : 1335L090904
BKGFILE : 13BG050506MT
Real Time : 0 02:40:04.28
Live time : 0 02:40:01.56

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	93.00*	20	522	1.40	185.99	1.53E+00	2.11E-03	245.6	6.09E+00
2	1	139.84*	85	280	1.29	279.62	2.02E+00	8.84E-03	36.9	1.48E+00
3	1	198.56*	101	251	2.15	397.01	1.90E+00	1.05E-02	31.8	2.87E+00
4	1	238.60*	58	172	1.24	477.07	1.73E+00	6.07E-03	44.4	1.17E+00
5	1	351.87*	72	180	2.07	703.55	1.34E+00	7.49E-03	42.4	2.12E+00
6	1	583.98*	92	76	1.60	1167.84	9.25E-01	9.63E-03	23.3	2.54E+01
7	1	596.02	44	60	2.24	1191.94	9.11E-01	4.61E-03	38.3	3.06E+00
8	1	609.07*	64	69	1.32	1218.06	8.97E-01	6.70E-03	30.0	3.49E-01
9	1	1120.75*	28	32	2.41	2242.35	5.69E-01	2.93E-03	49.3	7.67E-01
10	1	1460.88*	7	39	1.81	2923.82	4.69E-01	7.43E-04	249.6	1.37E+00
11	1	1764.20*	19	20	2.91	3531.92	4.11E-01	1.95E-03	57.3	1.35E+00
12	1	1910.87	15	10	2.04	3826.09	3.90E-01	1.52E-03	46.9	7.38E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/l	Decay Corr pCi/l	2-Sigma %Error
K-40	1460.81	7	10.67*	4.688E-01	1.109E+01	1.109E+01	499.15
TH-228	238.63	58	44.60*	1.733E+00	5.861E+00	5.913E+00	88.85
	240.98	------	3.95	1.723E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28777-3

Acquisition date : 1-JUN-2006 10:44:10

Total number of lines in spectrum	12	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	3	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/l	Decay Corr pCi/l	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.109E+01	1.109E+01	5.534E+01	499.15	
TH-228	1.91Y	1.01	5.861E+00	5.913E+00	5.254E+00	88.85	
	Total Activity :		1.695E+01	1.700E+01			
	Grand Total Activity :		1.695E+01	1.700E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28777-3

Acquisition date : 1-JUN-2006 10:44:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	93.00	20	522	1.40	185.99	179	13	2.11E-03	****	1.53E+00	
1	139.84	85	280	1.29	279.62	276	8	8.84E-03	73.9	2.02E+00	
1	198.56	101	251	2.15	397.01	392	10	1.05E-02	63.7	1.90E+00	
1	351.87	72	180	2.07	703.55	698	13	7.49E-03	84.8	1.34E+00	
1	583.98	92	76	1.60	1167.84	1162	14	9.63E-03	46.6	9.25E-01	T
1	596.02	44	60	2.24	1191.94	1186	11	4.61E-03	76.6	9.11E-01	
1	609.07	64	69	1.32	1218.06	1214	10	6.70E-03	60.0	8.97E-01	
1	1120.75	28	32	2.41	2242.35	2237	12	2.93E-03	98.6	5.69E-01	
1	1764.20	19	20	2.91	3531.92	3527	14	1.95E-03	****	4.11E-01	
1	1910.87	15	10	2.04	3826.09	3822	10	1.52E-03	93.8	3.90E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	3	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/l	Wtd Mean Decay Corr pCi/l	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.109E+01	1.109E+01	5.534E+01	499.15	
TH-228	1.91Y	1.01	5.861E+00	5.913E+00	5.254E+00	88.85	
	Total Activity :		1.695E+01	1.700E+01			

Grand Total Activity : 1.695E+01 1.700E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/l)	Act error	MDA (pCi/l)	MDA error	Act/MDA
K-40	1.109E+01	5.534E+01	4.308E+01	0.000E+00	0.257
TH-228	5.913E+00	5.254E+00	8.700E+00	0.000E+00	0.680

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/l)	K.L. Ided	Act error	MDA (pCi/l)	MDA error	Act/MDA

BE-7	-1.272E+01	2.780E+01	4.421E+01	0.000E+00	-0.288
NA-24	-7.944E-02	3.180E-02	Half-Life too short		
CR-51	-1.307E+01	3.104E+01	5.070E+01	0.000E+00	-0.258
MN-54	-8.789E-01	3.078E+00	4.921E+00	0.000E+00	-0.179
CO-57	-9.583E-01	3.027E+00	4.994E+00	0.000E+00	-0.192
CO-58	-1.305E+00	3.196E+00	5.069E+00	0.000E+00	-0.257
FE-59	-5.673E-01	6.440E+00	1.055E+01	0.000E+00	-0.054
CO-60	-3.185E+00	3.066E+00	4.422E+00	0.000E+00	-0.720
ZN-65	7.090E-01	8.313E+00	1.168E+01	0.000E+00	0.061
SE-75	6.986E-01	4.268E+00	6.966E+00	0.000E+00	0.100
SR-85	1.287E+01	3.850E+00	7.161E+00	0.000E+00	1.797
Y-88	-2.394E+00	3.114E+00	4.530E+00	0.000E+00	-0.529
NB-94	2.053E-01	2.832E+00	4.695E+00	0.000E+00	0.044
NB-95	1.342E+00	3.003E+00	5.095E+00	0.000E+00	0.263
ZR-95	1.636E+00	5.487E+00	9.213E+00	0.000E+00	0.178
MO-99	-4.243E+00	2.017E+02	3.313E+02	0.000E+00	-0.013
RU-103	2.527E+00	3.596E+00	6.091E+00	0.000E+00	0.415
RU-106	-2.698E+00	2.843E+01	4.692E+01	0.000E+00	-0.057
AG-110m	-3.048E-02	2.991E+00	4.948E+00	0.000E+00	-0.006
SN-113	-7.858E-01	4.129E+00	6.745E+00	0.000E+00	-0.117
SB-124	5.838E+00	6.057E+00	5.629E+00	0.000E+00	1.037
SB-125	1.025E+01	8.445E+00	1.476E+01	0.000E+00	0.694
TE-129M	1.328E+01	4.053E+01	6.751E+01	0.000E+00	0.197
I-131	7.422E-01	6.488E+00	1.079E+01	0.000E+00	0.069
BA-133	5.234E+00	4.846E+00	7.315E+00	0.000E+00	0.715
CS-134	5.299E+00	4.613E+00	5.814E+00	0.000E+00	0.911
CS-136	-1.216E+00	4.553E+00	7.291E+00	0.000E+00	-0.167
CS-137	-9.177E-01	3.341E+00	5.432E+00	0.000E+00	-0.169
CE-139	-1.144E+00	3.113E+00	5.074E+00	0.000E+00	-0.226
BA-140	4.367E+00	1.707E+01	2.816E+01	0.000E+00	0.155
LA-140	-2.612E+00	5.134E+00	7.963E+00	0.000E+00	-0.328
CE-141	-1.878E+00	6.975E+00	9.750E+00	0.000E+00	-0.193
CE-144	-2.711E+01	2.742E+01	3.718E+01	0.000E+00	-0.729
EU-152	-1.152E+01	1.148E+01	1.511E+01	0.000E+00	-0.762
EU-154	1.968E+00	6.196E+00	1.042E+01	0.000E+00	0.189
RA-226	1.455E+01	8.006E+01	1.381E+02	0.000E+00	0.105
AC-228	-8.052E+00	1.195E+01	1.937E+01	0.000E+00	-0.416
TH-232	-8.029E+00	1.192E+01	1.931E+01	0.000E+00	-0.416
U-235	-1.689E+01	2.677E+01	3.705E+01	0.000E+00	-0.456
U-238	-7.033E+00	3.117E+02	5.205E+02	0.000E+00	-0.014
AM-241	-6.189E+01	2.949E+01	4.498E+01	0.000E+00	-1.376

```
A,13L28777-3       ,06/01/2006 13:24,05/23/2006 13:50,   3.622E+00,L28777-3 WG EX
B,13L28777-3       ,LIBD                ,06/01/2006 10:13,1335L090904
C,K-40     ,YES,    1.109E+01,   5.534E+01,   4.308E+01,,     0.257
C,TH-228   ,YES,    5.913E+00,   5.254E+00,   8.700E+00,,     0.680
C,BE-7     ,NO ,   -1.272E+01,   2.780E+01,   4.421E+01,,    -0.288
C,CR-51    ,NO ,   -1.307E+01,   3.104E+01,   5.070E+01,,    -0.258
C,MN-54    ,NO ,   -8.789E-01,   3.078E+00,   4.921E+00,,    -0.179
C,CO-57    ,NO ,   -9.583E-01,   3.027E+00,   4.994E+00,,    -0.192
C,CO-58    ,NO ,   -1.305E+00,   3.196E+00,   5.069E+00,,    -0.257
C,FE-59    ,NO ,   -5.673E-01,   6.440E+00,   1.055E+01,,    -0.054
C,CO-60    ,NO ,   -3.185E+00,   3.066E+00,   4.422E+00,,    -0.720
C,ZN-65    ,NO ,    7.090E-01,   8.313E+00,   1.168E+01,,     0.061
C,SE-75    ,NO ,    6.986E-01,   4.268E+00,   6.966E+00,,     0.100
C,SR-85    ,NO ,    1.287E+01,   3.850E+00,   7.161E+00,,     1.797
C,Y-88     ,NO ,   -2.394E+00,   3.114E+00,   4.530E+00,,    -0.529
C,NB-94    ,NO ,    2.053E-01,   2.832E+00,   4.695E+00,,     0.044
C,NB-95    ,NO ,    1.342E+00,   3.003E+00,   5.095E+00,,     0.263
C,ZR-95    ,NO ,    1.636E+00,   5.487E+00,   9.213E+00,,     0.178
C,MO-99    ,NO ,   -4.243E+00,   2.017E+02,   3.313E+02,,    -0.013
C,RU-103   ,NO ,    2.527E+00,   3.596E+00,   6.091E+00,,     0.415
C,RU-106   ,NO ,   -2.698E+00,   2.843E+01,   4.692E+01,,    -0.057
C,AG-110m  ,NO ,   -3.048E-02,   2.991E+00,   4.948E+00,,    -0.006
C,SN-113   ,NO ,   -7.858E-01,   4.129E+00,   6.745E+00,,    -0.117
C,SB-124   ,NO ,    5.838E+00,   6.057E+00,   5.629E+00,,     1.037
C,SB-125   ,NO ,    1.025E+01,   8.445E+00,   1.476E+01,,     0.694
C,TE-129M  ,NO ,    1.328E+01,   4.053E+01,   6.751E+01,,     0.197
C,I-131    ,NO ,    7.422E-01,   6.488E+00,   1.079E+01,,     0.069
C,BA-133   ,NO ,    5.234E+00,   4.846E+00,   7.315E+00,,     0.715
C,CS-134   ,NO ,    5.299E+00,   4.613E+00,   5.814E+00,,     0.911
C,CS-136   ,NO ,   -1.216E+00,   4.553E+00,   7.291E+00,,    -0.167
C,CS-137   ,NO ,   -9.177E-01,   3.341E+00,   5.432E+00,,    -0.169
C,CE-139   ,NO ,   -1.144E+00,   3.113E+00,   5.074E+00,,    -0.226
C,BA-140   ,NO ,    4.367E+00,   1.707E+01,   2.816E+01,,     0.155
C,LA-140   ,NO ,   -2.612E+00,   5.134E+00,   7.963E+00,,    -0.328
C,CE-141   ,NO ,   -1.878E+00,   6.975E+00,   9.750E+00,,    -0.193
C,CE-144   ,NO ,   -2.711E+01,   2.742E+01,   3.718E+01,,    -0.729
C,EU-152   ,NO ,   -1.152E+01,   1.148E+01,   1.511E+01,,    -0.762
C,EU-154   ,NO ,    1.968E+00,   6.196E+00,   1.042E+01,,     0.189
C,RA-226   ,NO ,    1.455E+01,   8.006E+01,   1.381E+02,,     0.105
C,AC-228   ,NO ,   -8.052E+00,   1.195E+01,   1.937E+01,,    -0.416
C,TH-232   ,NO ,   -8.029E+00,   1.192E+01,   1.931E+01,,    -0.416
C,U-235    ,NO ,   -1.689E+01,   2.677E+01,   3.705E+01,,    -0.456
C,U-238    ,NO ,   -7.033E+00,   3.117E+02,   5.205E+02,,    -0.014
C,AM-241   ,NO ,   -6.189E+01,   2.949E+01,   4.498E+01,,    -1.376
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 13:27:07.40
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 1-JUN-2006 10:57:01.52

LIMS No., Customer Name, Client ID: L28777-4 WG DRESDEN

Sample ID	: 07L28777-4			Smple Date:	23-MAY-2006 11:14:00.
Sample Type	: WG			Geometry	: 0735L090904
Quantity	: 3.62530E+00 L			BKGFILE	: 07BG050506MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 02:30:01.76
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 02:30:00.00
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.16*	114	276	1.67	133.17	7.19E-01	1.26E-02	28.5	9.02E-01
2	1	140.03*	88	277	1.69	280.95	2.09E+00	9.81E-03	37.3	3.57E+00
3	1	186.20*	79	223	2.33	373.32	2.02E+00	8.82E-03	44.5	1.90E+00
4	1	569.60*	28	33	2.10	1140.29	1.03E+00	3.06E-03	41.8	6.73E+00
5	1	583.43*	72	40	3.61	1167.94	1.01E+00	8.01E-03	26.2	1.55E+00
6	1	595.92	30	78	1.94	1192.92	9.96E-01	3.32E-03	62.1	1.60E+00
7	1	609.31*	48	64	2.05	1219.72	9.81E-01	5.38E-03	38.8	1.87E+00
8	1	1313.25	52	8	8.94	2627.42	5.56E-01	5.74E-03	16.5	1.26E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	79	3.28*	2.020E+00	9.922E+01	9.922E+01	88.93

Flag: "*" = Keyline

Summary of Nuclide Activity Page : 2
Sample ID : 07L28777-4 Acquisition date : 1-JUN-2006 10:57:01

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	9.922E+01	9.922E+01	8.824E+01	88.93	
	Total Activity :		9.922E+01	9.922E+01			
	Grand Total Activity :		9.922E+01	9.922E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28777-4 Acquisition date : 1-JUN-2006 10:57:01

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.16	114	276	1.67	133.17	129	9	1.26E-02	57.1	7.19E-01	
1	140.03	88	277	1.69	280.95	277	10	9.81E-03	74.5	2.09E+00	
1	569.60	28	33	2.10	1140.29	1137	8	3.06E-03	83.5	1.03E+00	
1	583.43	72	40	3.61	1167.94	1161	18	8.01E-03	52.4	1.01E+00	T
1	595.92	30	78	1.94	1192.92	1187	12	3.32E-03	****	9.96E-01	
1	609.31	48	64	2.05	1219.72	1214	11	5.38E-03	77.5	9.81E-01	
1	1313.25	52	8	8.94	2627.42	2623	16	5.74E-03	33.1	5.56E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	9.922E+01	9.922E+01	8.824E+01	88.93	
	Total Activity :		9.922E+01	9.922E+01			
Grand Total Activity :			9.922E+01	9.922E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	9.922E+01	8.824E+01	1.033E+02	0.000E+00	0.961

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	9.693E+00		2.541E+01	4.317E+01	0.000E+00	0.225
NA-24	-2.935E-02		3.426E-02	Half-Life too short		
K-40	1.162E+01		3.982E+01	7.764E+01	0.000E+00	0.150
CR-51	-3.117E+01		2.830E+01	4.302E+01	0.000E+00	-0.725

MN-54	8.340E-01	2.857E+00	4.843E+00	0.000E+00	0.172
CO-57	2.131E+00	2.552E+00	4.400E+00	0.000E+00	0.484
CO-58	-4.101E+00	3.085E+00	4.470E+00	0.000E+00	-0.917
FE-59	9.905E-01	5.969E+00	1.000E+01	0.000E+00	0.099
CO-60	3.472E-01	2.854E+00	4.777E+00	0.000E+00	0.073
ZN-65	9.076E+00	6.440E+00	1.178E+01	0.000E+00	0.770
SE-75	2.248E+00	3.712E+00	6.264E+00	0.000E+00	0.359
SR-85	1.686E+01	3.576E+00	7.063E+00	0.000E+00	2.387
Y-88	1.533E+00	3.689E+00	6.287E+00	0.000E+00	0.244
NB-94	-1.824E+00	2.857E+00	4.509E+00	0.000E+00	-0.404
NB-95	1.420E+00	3.157E+00	5.324E+00	0.000E+00	0.267
ZR-95	1.406E+00	5.636E+00	9.386E+00	0.000E+00	0.150
MO-99	-1.979E+00	1.978E+02	3.242E+02	0.000E+00	-0.006
RU-103	7.159E-01	3.269E+00	5.485E+00	0.000E+00	0.131
RU-106	-1.769E+01	2.799E+01	4.348E+01	0.000E+00	-0.407
AG-110m	-1.996E-02	2.718E+00	4.504E+00	0.000E+00	-0.004
SN-113	-1.440E+00	3.628E+00	5.828E+00	0.000E+00	-0.247
SB-124	-6.680E+00	8.421E+00	4.962E+00	0.000E+00	-1.346
SB-125	3.844E+00	7.506E+00	1.262E+01	0.000E+00	0.305
TE-129M	-6.602E-01	3.504E+01	5.669E+01	0.000E+00	-0.012
I-131	3.719E+00	5.824E+00	9.952E+00	0.000E+00	0.374
BA-133	-2.442E+00	4.080E+00	6.570E+00	0.000E+00	-0.372
CS-134	2.085E+00	5.781E+00	5.322E+00	0.000E+00	0.392
CS-136	7.310E-01	4.463E+00	7.342E+00	0.000E+00	0.100
CS-137	-7.268E-01	3.000E+00	4.889E+00	0.000E+00	-0.149
CE-139	-8.211E-03	2.677E+00	4.386E+00	0.000E+00	-0.002
BA-140	-4.949E+00	1.572E+01	2.534E+01	0.000E+00	-0.195
LA-140	4.144E-01	5.552E+00	9.252E+00	0.000E+00	0.045
CE-141	3.151E+00	5.879E+00	8.614E+00	0.000E+00	0.366
CE-144	-9.293E+00	2.167E+01	3.165E+01	0.000E+00	-0.294
EU-152	-3.152E+01	9.394E+00	1.311E+01	0.000E+00	-2.405
EU-154	5.774E+00	5.351E+00	9.293E+00	0.000E+00	0.621
AC-228	5.455E+00	1.028E+01	1.842E+01	0.000E+00	0.296
TH-228	4.553E+00	5.325E+00	9.393E+00	0.000E+00	0.485
TH-232	5.439E+00	1.025E+01	1.836E+01	0.000E+00	0.296
U-235	-9.579E+00	2.355E+01	3.290E+01	0.000E+00	-0.291
U-238	1.755E+02	3.153E+02	5.417E+02	0.000E+00	0.324
AM-241	-1.100E+01	2.249E+01	3.474E+01	0.000E+00	-0.317

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A,07L28777-4       ,06/01/2006 13:27,05/23/2006 11:14,   3.625E+00,L28777-4 WG DR
B,07L28777-4       ,LIBD                ,06/23/2005 07:26,0735L090904
C,RA-226   ,YES,    9.922E+01,    8.824E+01,    1.033E+02,,     0.961
C,BE-7     ,NO ,    9.693E+00,    2.541E+01,    4.317E+01,,     0.225
C,K-40     ,NO ,    1.162E+01,    3.982E+01,    7.764E+01,,     0.150
C,CR-51    ,NO ,   -3.117E+01,    2.830E+01,    4.302E+01,,    -0.725
C,MN-54    ,NO ,    8.340E-01,    2.857E+00,    4.843E+00,,     0.172
C,CO-57    ,NO ,    2.131E+00,    2.552E+00,    4.400E+00,,     0.484
C,CO-58    ,NO ,   -4.101E+00,    3.085E+00,    4.470E+00,,    -0.917
C,FE-59    ,NO ,    9.905E-01,    5.969E+00,    1.000E+01,,     0.099
C,CO-60    ,NO ,    3.472E-01,    2.854E+00,    4.777E+00,,     0.073
C,ZN-65    ,NO ,    9.076E+00,    6.440E+00,    1.178E+01,,     0.770
C,SE-75    ,NO ,    2.248E+00,    3.712E+00,    6.264E+00,,     0.359
C,SR-85    ,NO ,    1.686E+01,    3.576E+00,    7.063E+00,,     2.387
C,Y-88     ,NO ,    1.533E+00,    3.689E+00,    6.287E+00,,     0.244
C,NB-94    ,NO ,   -1.824E+00,    2.857E+00,    4.509E+00,,    -0.404
C,NB-95    ,NO ,    1.420E+00,    3.157E+00,    5.324E+00,,     0.267
C,ZR-95    ,NO ,    1.406E+00,    5.636E+00,    9.386E+00,,     0.150
C,MO-99    ,NO ,   -1.979E+00,    1.978E+02,    3.242E+02,,    -0.006
C,RU-103   ,NO ,    7.159E-01,    3.269E+00,    5.485E+00,,     0.131
C,RU-106   ,NO ,   -1.769E+01,    2.799E+01,    4.348E+01,,    -0.407
C,AG-110m  ,NO ,   -1.996E-02,    2.718E+00,    4.504E+00,,    -0.004
C,SN-113   ,NO ,   -1.440E+00,    3.628E+00,    5.828E+00,,    -0.247
C,SB-124   ,NO ,   -6.680E+00,    8.421E+00,    4.962E+00,,    -1.346
C,SB-125   ,NO ,    3.844E+00,    7.506E+00,    1.262E+01,,     0.305
C,TE-129M  ,NO ,   -6.602E-01,    3.504E+01,    5.669E+01,,    -0.012
C,I-131    ,NO ,    3.719E+00,    5.824E+00,    9.952E+00,,     0.374
C,BA-133   ,NO ,   -2.442E+00,    4.080E+00,    6.570E+00,,    -0.372
C,CS-134   ,NO ,    2.085E+00,    5.781E+00,    5.322E+00,,     0.392
C,CS-136   ,NO ,    7.310E-01,    4.463E+00,    7.342E+00,,     0.100
C,CS-137   ,NO ,   -7.268E-01,    3.000E+00,    4.889E+00,,    -0.149
C,CE-139   ,NO ,   -8.211E-03,    2.677E+00,    4.386E+00,,    -0.002
C,BA-140   ,NO ,   -4.949E+00,    1.572E+01,    2.534E+01,,    -0.195
C,LA-140   ,NO ,    4.144E-01,    5.552E+00,    9.252E+00,,     0.045
C,CE-141   ,NO ,    3.151E+00,    5.879E+00,    8.614E+00,,     0.366
C,CE-144   ,NO ,   -9.293E+00,    2.167E+01,    3.165E+01,,    -0.294
C,EU-152   ,NO ,   -3.152E+01,    9.394E+00,    1.311E+01,,    -2.405
C,EU-154   ,NO ,    5.774E+00,    5.351E+00,    9.293E+00,,     0.621
C,AC-228   ,NO ,    5.455E+00,    1.028E+01,    1.842E+01,,     0.296
C,TH-228   ,NO ,    4.553E+00,    5.325E+00,    9.393E+00,,     0.485
C,TH-232   ,NO ,    5.439E+00,    1.025E+01,    1.836E+01,,     0.296
C,U-235    ,NO ,   -9.579E+00,    2.355E+01,    3.290E+01,,    -0.291
C,U-238    ,NO ,    1.755E+02,    3.153E+02,    5.417E+02,,     0.324
C,AM-241   ,NO ,   -1.100E+01,    2.249E+01,    3.474E+01,,    -0.317
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Sec. Review: KO Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 14:17:34.86
TBE23 03017322 HpGe ********** Aquisition Date/Time: 1-JUN-2006 10:57:06.64

LIMS No., Customer Name, Client ID: L28777-5 WG DRESDEN

Sample ID : 23L28777-5
Sample Type : WG
Quantity : 3.58520E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 13:36:00.
Geometry : 2335L090704
BKGFILE : 23BG050506MT
Real Time : 0 03:20:08.06
Live time : 0 03:20:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	4	33.76*	15	26	1.19	67.84	9.34E-02	1.24E-03	132.7	2.33E+00
2	0	63.32*	2	369	0.89	126.92	9.42E-01	1.49E-04	*****	
3	0	65.83*	29	378	1.30	131.94	1.02E+00	2.45E-03	113.1	
4	0	92.56*	6	466	1.33	185.36	1.69E+00	5.05E-04	671.9	
5	0	139.52*	90	472	1.16	279.20	2.05E+00	7.52E-03	45.5	
6	0	197.86*	135	309	1.36	395.80	1.90E+00	1.13E-02	26.4	
7	0	295.19*	19	188	1.02	590.35	1.50E+00	1.56E-03	142.9	
8	0	351.86*	91	187	1.08	703.62	1.32E+00	7.60E-03	33.2	
9	0	582.91*	21	80	1.07	1165.52	8.89E-01	1.79E-03	85.6	
10	0	609.07*	107	79	1.23	1217.82	8.59E-01	8.90E-03	21.2	
11	0	1120.26*	57	55	1.93	2240.05	5.52E-01	4.71E-03	35.8	
12	0	1460.96*	13	51	1.62	2921.57	4.59E-01	1.10E-03	153.6	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	13	10.67*	4.594E-01	1.692E+01	1.692E+01	307.20

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28777-5 Acquisition date : 1-JUN-2006 10:57:06

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.692E+01	1.692E+01	5.198E+01	307.20	
	Total Activity :		1.692E+01	1.692E+01			
	Grand Total Activity :		1.692E+01	1.692E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28777-5

Acquisition date : 1-JUN-2006 10:57:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	33.76	15	26	1.19	67.84	64	19	1.24E-03	****	9.34E-02	
0	63.32	2	369	0.89	126.92	124	7	1.49E-04	****	9.42E-01	
0	65.83	29	378	1.30	131.94	131	7	2.45E-03	****	1.02E+00	
0	92.56	6	466	1.33	185.36	182	8	5.05E-04	****	1.69E+00	
0	139.52	90	472	1.16	279.20	275	9	7.52E-03	91.0	2.05E+00	
0	197.86	135	309	1.36	395.80	391	10	1.13E-02	52.9	1.90E+00	
0	295.19	19	188	1.02	590.35	587	9	1.56E-03	****	1.50E+00	
0	351.86	91	187	1.08	703.62	698	12	7.60E-03	66.4	1.32E+00	
0	582.91	21	80	1.07	1165.52	1160	10	1.79E-03	****	8.89E-01	T
0	609.07	107	79	1.23	1217.82	1212	13	8.90E-03	42.4	8.59E-01	
0	1120.26	57	55	1.93	2240.05	2231	20	4.71E-03	71.5	5.52E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.692E+01	1.692E+01	5.198E+01	307.20	
	Total Activity :		1.692E+01	1.692E+01			
Grand Total Activity :			1.692E+01	1.692E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.692E+01	5.198E+01	4.118E+01	0.000E+00	0.411

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	7.692E-01	2.663E+01	4.532E+01	0.000E+00	0.017
NA-24	-4.752E-02	2.967E-02	Half-Life too short		
CR-51	-1.514E+01	2.944E+01	4.934E+01	0.000E+00	-0.307
MN-54	2.808E+00	2.701E+00	4.996E+00	0.000E+00	0.562
CO-57	1.929E+00	3.268E+00	5.569E+00	0.000E+00	0.346
CO-58	-3.832E-01	2.925E+00	5.026E+00	0.000E+00	-0.076
FE-59	3.304E+00	5.627E+00	1.036E+01	0.000E+00	0.319
CO-60	7.685E-01	2.713E+00	4.917E+00	0.000E+00	0.156
ZN-65	1.527E+01	7.029E+00	1.264E+01	0.000E+00	1.208
SE-75	-1.566E+00	4.033E+00	6.820E+00	0.000E+00	-0.230
SR-85	1.074E+01	3.334E+00	6.348E+00	0.000E+00	1.691
Y-88	-2.076E+00	2.982E+00	4.971E+00	0.000E+00	-0.418
NB-94	-5.034E-01	2.560E+00	4.396E+00	0.000E+00	-0.115
NB-95	3.666E+00	2.966E+00	5.513E+00	0.000E+00	0.665
ZR-95	1.186E+00	5.102E+00	8.992E+00	0.000E+00	0.132
MO-99	8.097E+01	1.891E+02	3.375E+02	0.000E+00	0.240
RU-103	1.675E+00	3.412E+00	5.922E+00	0.000E+00	0.283
RU-106	-1.935E+01	2.555E+01	4.197E+01	0.000E+00	-0.461
AG-110m	1.376E+00	2.717E+00	4.862E+00	0.000E+00	0.283
SN-113	1.730E+00	3.920E+00	6.798E+00	0.000E+00	0.255
SB-124	-3.693E+00	3.808E+00	5.166E+00	0.000E+00	-0.715
SB-125	-3.405E+00	8.063E+00	1.347E+01	0.000E+00	-0.253
TE-129M	9.200E+00	3.850E+01	6.619E+01	0.000E+00	0.139
I-131	5.664E+00	6.270E+00	1.107E+01	0.000E+00	0.512
BA-133	4.698E+00	4.757E+00	7.243E+00	0.000E+00	0.649
CS-134	3.034E+00	3.919E+00	5.983E+00	0.000E+00	0.507
CS-136	1.835E+00	4.134E+00	7.390E+00	0.000E+00	0.248
CS-137	-1.107E+00	2.931E+00	4.988E+00	0.000E+00	-0.222
CE-139	-1.197E+00	3.259E+00	5.401E+00	0.000E+00	-0.222
BA-140	-3.173E+00	1.489E+01	2.507E+01	0.000E+00	-0.127
LA-140	-1.990E+00	4.846E+00	8.386E+00	0.000E+00	-0.237
CE-141	-4.907E-01	7.682E+00	1.090E+01	0.000E+00	-0.045
CE-144	-2.248E+01	2.926E+01	4.060E+01	0.000E+00	-0.554
EU-152	-1.713E+01	1.147E+01	1.515E+01	0.000E+00	-1.131
EU-154	5.478E+00	6.734E+00	1.153E+01	0.000E+00	0.475
RA-226	4.668E+01	7.872E+01	1.363E+02	0.000E+00	0.343
AC-228	5.960E-01	1.024E+01	1.819E+01	0.000E+00	0.033
TH-228	2.991E+00	5.710E+00	9.712E+00	0.000E+00	0.308
TH-232	5.943E-01	1.021E+01	1.814E+01	0.000E+00	0.033
U-235	5.372E+00	2.947E+01	4.224E+01	0.000E+00	0.127
U-238	1.753E+02	3.256E+02	5.891E+02	0.000E+00	0.298
AM-241	2.767E+01	1.905E+01	2.831E+01	0.000E+00	0.977

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A,23L28777-5      ,06/01/2006 14:17,05/23/2006 13:36,   3.585E+00,L28777-5 WG DR
B,23L28777-5      ,LIBD                ,06/01/2006 10:14,2335L090704
C,K-40     ,YES,   1.692E+01,   5.198E+01,   4.118E+01,,    0.411
C,BE-7     ,NO ,   7.692E-01,   2.663E+01,   4.532E+01,,    0.017
C,CR-51    ,NO ,  -1.514E+01,   2.944E+01,   4.934E+01,,   -0.307
C,MN-54    ,NO ,   2.808E+00,   2.701E+00,   4.996E+00,,    0.562
C,CO-57    ,NO ,   1.929E+00,   3.268E+00,   5.569E+00,,    0.346
C,CO-58    ,NO ,  -3.832E-01,   2.925E+00,   5.026E+00,,   -0.076
C,FE-59    ,NO ,   3.304E+00,   5.627E+00,   1.036E+01,,    0.319
C,CO-60    ,NO ,   7.685E-01,   2.713E+00,   4.917E+00,,    0.156
C,ZN-65    ,NO ,   1.527E+01,   7.029E+00,   1.264E+01,,    1.208
C,SE-75    ,NO ,  -1.566E+00,   4.033E+00,   6.820E+00,,   -0.230
C,SR-85    ,NO ,   1.074E+01,   3.334E+00,   6.348E+00,,    1.691
C,Y-88     ,NO ,  -2.076E+00,   2.982E+00,   4.971E+00,,   -0.418
C,NB-94    ,NO ,  -5.034E-01,   2.560E+00,   4.396E+00,,   -0.115
C,NB-95    ,NO ,   3.666E+00,   2.966E+00,   5.513E+00,,    0.665
C,ZR-95    ,NO ,   1.186E+00,   5.102E+00,   8.992E+00,,    0.132
C,MO-99    ,NO ,   8.097E+01,   1.891E+02,   3.375E+02,,    0.240
C,RU-103   ,NO ,   1.675E+00,   3.412E+00,   5.922E+00,,    0.283
C,RU-106   ,NO ,  -1.935E+01,   2.555E+01,   4.197E+01,,   -0.461
C,AG-110m  ,NO ,   1.376E+00,   2.717E+00,   4.862E+00,,    0.283
C,SN-113   ,NO ,   1.730E+00,   3.920E+00,   6.798E+00,,    0.255
C,SB-124   ,NO ,  -3.693E+00,   3.808E+00,   5.166E+00,,   -0.715
C,SB-125   ,NO ,  -3.405E+00,   8.063E+00,   1.347E+01,,   -0.253
C,TE-129M  ,NO ,   9.200E+00,   3.850E+01,   6.619E+01,,    0.139
C,I-131    ,NO ,   5.664E+00,   6.270E+00,   1.107E+01,,    0.512
C,BA-133   ,NO ,   4.698E+00,   4.757E+00,   7.243E+00,,    0.649
C,CS-134   ,NO ,   3.034E+00,   3.919E+00,   5.983E+00,,    0.507
C,CS-136   ,NO ,   1.835E+00,   4.134E+00,   7.390E+00,,    0.248
C,CS-137   ,NO ,  -1.107E+00,   2.931E+00,   4.988E+00,,   -0.222
C,CE-139   ,NO ,  -1.197E+00,   3.259E+00,   5.401E+00,,   -0.222
C,BA-140   ,NO ,  -3.173E+00,   1.489E+01,   2.507E+01,,   -0.127
C,LA-140   ,NO ,  -1.990E+00,   4.846E+00,   8.386E+00,,   -0.237
C,CE-141   ,NO ,  -4.907E-01,   7.682E+00,   1.090E+01,,   -0.045
C,CE-144   ,NO ,  -2.248E+01,   2.926E+01,   4.060E+01,,   -0.554
C,EU-152   ,NO ,  -1.713E+01,   1.147E+01,   1.515E+01,,   -1.131
C,EU-154   ,NO ,   5.478E+00,   6.734E+00,   1.153E+01,,    0.475
C,RA-226   ,NO ,   4.668E+01,   7.872E+01,   1.363E+02,,    0.343
C,AC-228   ,NO ,   5.960E-01,   1.024E+01,   1.819E+01,,    0.033
C,TH-228   ,NO ,   2.991E+00,   5.710E+00,   9.712E+00,,    0.308
C,TH-232   ,NO ,   5.943E-01,   1.021E+01,   1.814E+01,,    0.033
C,U-235    ,NO ,   5.372E+00,   2.947E+01,   4.224E+01,,    0.127
C,U-238    ,NO ,   1.753E+02,   3.256E+02,   5.891E+02,,    0.298
C,AM-241   ,NO ,   2.767E+01,   1.905E+01,   2.831E+01,,    0.977
```

Sec. Review: Analyst: LIMS:

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 14:31:07.08
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 1-JUN-2006 11:27:19.06

LIMS No., Customer Name, Client ID: L28777-6 WG DRESDEN

Sample ID : 04L28777-6
Sample Type : WG
Quantity : 3.53510E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 15:50:00.
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 03:03:38.31
Live time : 0 03:03:36.43

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.62*	57	408	0.88	133.80	6.57E-01	5.13E-03	67.0	1.53E+00
2	1	140.16*	68	288	1.65	280.90	1.82E+00	6.17E-03	49.7	2.40E+00
3	1	185.73*	51	201	2.18	372.06	1.73E+00	4.64E-03	54.7	2.52E+00
4	1	198.95*	50	296	1.44	398.50	1.68E+00	4.55E-03	72.2	2.72E+00
5	1	238.86*	19	151	1.02	478.32	1.52E+00	1.70E-03	122.3	2.07E+00
6	1	295.16*	35	131	1.45	590.95	1.32E+00	3.17E-03	61.2	1.45E+00
7	1	351.78*	85	123	1.92	704.18	1.17E+00	7.68E-03	29.3	2.59E+00
8	1	582.94*	54	42	3.70	1166.49	8.00E-01	4.86E-03	31.9	1.01E+00
9	1	596.56	20	82	0.83	1193.73	7.86E-01	1.79E-03	97.7	2.79E+00
10	1	609.34*	99	42	1.88	1219.29	7.73E-01	9.01E-03	18.1	7.39E-01
11	1	661.29	37	65	2.56	1323.19	7.26E-01	3.39E-03	47.4	1.42E+00
12	1	911.13*	14	22	1.88	1822.78	5.66E-01	1.26E-03	77.8	3.09E-01
13	1	934.17	27	36	4.06	1868.87	5.55E-01	2.44E-03	47.2	3.61E+00
14	1	1764.47*	18	4	3.14	3528.83	3.43E-01	1.64E-03	41.7	1.92E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: fission

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CS-137	661.65	37	85.12*	7.258E-01	4.199E+00	4.201E+00	94.85

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	51	3.28*	1.727E+00	6.268E+01	6.268E+01	109.47
AC-228	835.50	------	1.75	6.054E-01	------ Line Not Found		------
	911.07	14	27.70*	5.657E-01	6.137E+00	6.155E+00	155.63
TH-228	238.63	19	44.60*	1.519E+00	1.914E+00	1.931E+00	244.67
	240.98	------	3.95	1.511E+00	------ Line Not Found		------
TH-232	583.14	54	30.25	7.995E-01	1.537E+01	1.537E+01	63.85
	911.07	14	27.70*	5.657E-01	6.137E+00	6.137E+00	155.63
	969.11	------	16.60	5.389E-01	------ Line Not Found		------
U-235	143.76	------	10.50*	1.822E+00	------ Line Not Found		------
	163.35	------	4.70	1.796E+00	------ Line Not Found		------

185.71	51	54.00	1.727E+00	3.807E+00	3.807E+00	109.47
205.31	------	4.70	1.652E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28777-6

Acquisition date : 1-JUN-2006 11:27:19

Total number of lines in spectrum	14	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	5	35.71%

Nuclide Type : fission

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.17Y	1.00	4.199E+00	4.201E+00	3.985E+00	94.85	
	Total Activity :		4.199E+00	4.201E+00			

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	6.268E+01	6.268E+01	6.861E+01	109.47	
AC-228	5.75Y	1.00	6.137E+00	6.155E+00	9.578E+00	155.63	
TH-228	1.91Y	1.01	1.914E+00	1.931E+00	4.724E+00	244.67	
TH-232	1.41E+10Y	1.00	6.137E+00	6.137E+00	9.550E+00	155.63	
U-235	7.04E+08Y	1.00	3.807E+00	3.807E+00	4.167E+00	109.47	K
	Total Activity :		8.067E+01	8.071E+01			

Grand Total Activity : 8.487E+01 8.491E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28777-6

Acquisition date : 1-JUN-2006 11:27:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.62	57	408	0.88	133.80	128	9	5.13E-03	****	6.57E-01	
1	140.16	68	288	1.65	280.90	277	10	6.17E-03	99.3	1.82E+00	
1	198.95	50	296	1.44	398.50	392	12	4.55E-03	****	1.68E+00	
1	295.16	35	131	1.45	590.95	587	8	3.17E-03	****	1.32E+00	
1	351.78	85	123	1.92	704.18	700	11	7.68E-03	58.7	1.17E+00	
1	596.56	20	82	0.83	1193.73	1188	12	1.79E-03	****	7.86E-01	
1	609.34	99	42	1.88	1219.29	1213	12	9.01E-03	36.1	7.73E-01	
1	934.17	27	36	4.06	1868.87	1863	12	2.44E-03	94.5	5.55E-01	
1	1764.47	18	4	3.14	3528.83	3520	15	1.64E-03	83.4	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	5	35.71%

Nuclide Type : fission

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.17Y	1.00	4.199E+00	4.201E+00	3.985E+00	94.85	
			---	---			
	Total Activity :		4.199E+00	4.201E+00			

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	6.268E+01	6.268E+01	6.861E+01	109.47	
TH-228	1.91Y	1.01	1.914E+00	1.931E+00	4.724E+00	244.67	
TH-232	1.41E+10Y	1.00	1.063E+01	1.063E+01	0.685E+01	64.40	
			---	---			
	Total Activity :		7.522E+01	7.524E+01			

Grand Total Activity : 7.942E+01 7.944E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
CS-137	4.201E+00	3.985E+00	5.056E+00	0.000E+00	0.831
RA-226	6.268E+01	6.861E+01	1.141E+02	0.000E+00	0.549
TH-228	1.931E+00	4.724E+00	8.361E+00	0.000E+00	0.231
TH-232	1.063E+01	6.845E+00	1.823E+01	0.000E+00	0.583

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.036E+01		2.510E+01	3.990E+01	0.000E+00	-0.260
NA-24	-5.632E-02		3.095E-02	Half-Life too short		
K-40	5.639E+00		3.922E+01	7.493E+01	0.000E+00	0.075
CR-51	-1.850E+01		3.135E+01	4.956E+01	0.000E+00	-0.373
MN-54	1.974E+00		2.988E+00	5.185E+00	0.000E+00	0.381
CO-57	9.574E-01		2.662E+00	4.471E+00	0.000E+00	0.214
CO-58	-2.078E-01		2.994E+00	4.937E+00	0.000E+00	-0.042
FE-59	5.079E+00		6.612E+00	1.164E+01	0.000E+00	0.437
CO-60	3.001E+00		3.441E+00	6.334E+00	0.000E+00	0.474
ZN-65	4.220E+00		7.028E+00	1.217E+01	0.000E+00	0.347
SE-75	-7.470E-01		3.944E+00	6.444E+00	0.000E+00	-0.116
SR-85	1.915E+01		3.972E+00	7.757E+00	0.000E+00	2.468
Y-88	-2.558E+00		3.731E+00	5.633E+00	0.000E+00	-0.454
NB-94	6.589E-01		2.711E+00	4.510E+00	0.000E+00	0.146
NB-95	3.186E+00		3.195E+00	5.571E+00	0.000E+00	0.572
ZR-95	-5.487E+00		5.542E+00	8.255E+00	0.000E+00	-0.665
MO-99	-6.459E+00		2.061E+02	3.344E+02	0.000E+00	-0.019
RU-103	3.003E-01		3.551E+00	5.815E+00	0.000E+00	0.052
RU-106	1.686E+01		2.702E+01	4.646E+01	0.000E+00	0.363
AG-110m	2.804E+00		3.580E+00	5.358E+00	0.000E+00	0.523
SN-113	3.258E+00		3.934E+00	6.795E+00	0.000E+00	0.479
SB-124	3.790E+00		5.743E+00	5.063E+00	0.000E+00	0.749
SB-125	2.538E+00		8.201E+00	1.375E+01	0.000E+00	0.185
TE-129M	1.408E+01		3.914E+01	6.548E+01	0.000E+00	0.215
I-131	3.699E-01		6.000E+00	1.003E+01	0.000E+00	0.037
BA-133	2.673E+00		4.729E+00	6.990E+00	0.000E+00	0.382
CS-134	6.539E+00		5.367E+00	5.253E+00	0.000E+00	1.245
CS-136	1.899E+00		4.191E+00	7.202E+00	0.000E+00	0.264
CE-139	1.304E+00		2.721E+00	4.520E+00	0.000E+00	0.288
BA-140	2.639E+00		1.571E+01	2.575E+01	0.000E+00	0.102
LA-140	1.807E+00		6.275E+00	1.057E+01	0.000E+00	0.171
CE-141	-3.469E-01		6.244E+00	8.784E+00	0.000E+00	-0.039
CE-144	-2.134E+01		2.317E+01	3.277E+01	0.000E+00	-0.651
EU-152	-1.487E+01		1.131E+01	1.469E+01	0.000E+00	-1.012
EU-154	-1.365E+00		5.500E+00	9.045E+00	0.000E+00	-0.151
AC-228	6.155E+00		9.578E+00	1.959E+01	0.000E+00	0.314
U-235	3.398E+00		2.375E+01	3.379E+01	0.000E+00	0.101
U-238	1.023E+02		3.349E+02	5.602E+02	0.000E+00	0.183
AM-241	-2.100E+01		2.678E+01	3.835E+01	0.000E+00	-0.548

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A,04L28777-6       ,06/01/2006 14:31,05/23/2006 15:50,   3.535E+00,L28777-6 WG DR
B,04L28777-6       ,LIBD                ,03/14/2005 09:04,0435L090804
C,CS-137   ,YES,   4.201E+00,   3.985E+00,   5.056E+00,,    0.831
C,RA-226   ,YES,   6.268E+01,   6.861E+01,   1.141E+02,,    0.549
C,TH-228   ,YES,   1.931E+00,   4.724E+00,   8.361E+00,,    0.231
C,TH-232   ,YES,   1.063E+01,   6.845E+00,   1.823E+01,,    0.583
C,BE-7     ,NO ,  -1.036E+01,   2.510E+01,   3.990E+01,,   -0.260
C,K-40     ,NO ,   5.639E+00,   3.922E+01,   7.493E+01,,    0.075
C,CR-51    ,NO ,  -1.850E+01,   3.135E+01,   4.956E+01,,   -0.373
C,MN-54    ,NO ,   1.974E+00,   2.988E+00,   5.185E+00,,    0.381
C,CO-57    ,NO ,   9.574E-01,   2.662E+00,   4.471E+00,,    0.214
C,CO-58    ,NO ,  -2.078E-01,   2.994E+00,   4.937E+00,,   -0.042
C,FE-59    ,NO ,   5.079E+00,   6.612E+00,   1.164E+01,,    0.437
C,CO-60    ,NO ,   3.001E+00,   3.441E+00,   6.334E+00,,    0.474
C,ZN-65    ,NO ,   4.220E+00,   7.028E+00,   1.217E+01,,    0.347
C,SE-75    ,NO ,  -7.470E-01,   3.944E+00,   6.444E+00,,   -0.116
C,SR-85    ,NO ,   1.915E+01,   3.972E+00,   7.757E+00,,    2.468
C,Y-88     ,NO ,  -2.558E+00,   3.731E+00,   5.633E+00,,   -0.454
C,NB-94    ,NO ,   6.589E-01,   2.711E+00,   4.510E+00,,    0.146
C,NB-95    ,NO ,   3.186E+00,   3.195E+00,   5.571E+00,,    0.572
C,ZR-95    ,NO ,  -5.487E+00,   5.542E+00,   8.255E+00,,   -0.665
C,MO-99    ,NO ,  -6.459E+00,   2.061E+02,   3.344E+02,,   -0.019
C,RU-103   ,NO ,   3.003E-01,   3.551E+00,   5.815E+00,,    0.052
C,RU-106   ,NO ,   1.686E+01,   2.702E+01,   4.646E+01,,    0.363
C,AG-110m  ,NO ,   2.804E+00,   3.580E+00,   5.358E+00,,    0.523
C,SN-113   ,NO ,   3.258E+00,   3.934E+00,   6.795E+00,,    0.479
C,SB-124   ,NO ,   3.790E+00,   5.743E+00,   5.063E+00,,    0.749
C,SB-125   ,NO ,   2.538E+00,   8.201E+00,   1.375E+01,,    0.185
C,TE-129M  ,NO ,   1.408E+01,   3.914E+01,   6.548E+01,,    0.215
C,I-131    ,NO ,   3.699E-01,   6.000E+00,   1.003E+01,,    0.037
C,BA-133   ,NO ,   2.673E+00,   4.729E+00,   6.990E+00,,    0.382
C,CS-134   ,NO ,   6.539E+00,   5.367E+00,   5.253E+00,,    1.245
C,CS-136   ,NO ,   1.899E+00,   4.191E+00,   7.202E+00,,    0.264
C,CE-139   ,NO ,   1.304E+00,   2.721E+00,   4.520E+00,,    0.288
C,BA-140   ,NO ,   2.639E+00,   1.571E+01,   2.575E+01,,    0.102
C,LA-140   ,NO ,   1.807E+00,   6.275E+00,   1.057E+01,,    0.171
C,CE-141   ,NO ,  -3.469E-01,   6.244E+00,   8.784E+00,,   -0.039
C,CE-144   ,NO ,  -2.134E+01,   2.317E+01,   3.277E+01,,   -0.651
C,EU-152   ,NO ,  -1.487E+01,   1.131E+01,   1.469E+01,,   -1.012
C,EU-154   ,NO ,  -1.365E+00,   5.500E+00,   9.045E+00,,   -0.151
C,AC-228   ,NO ,   6.155E+00,   9.578E+00,   1.959E+01,,    0.314
C,U-235    ,NO ,   3.398E+00,   2.375E+01,   3.379E+01,,    0.101
C,U-238    ,NO ,   1.023E+02,   3.349E+02,   5.602E+02,,    0.183
C,AM-241   ,NO ,  -2.100E+01,   2.678E+01,   3.835E+01,,   -0.548
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 16:15:19.56
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 1-JUN-2006 13:33:12.89

LIMS No., Customer Name, Client ID: L28777-7 WG EXELON/DRES

Sample ID : 13L28777-7
Sample Type : WG
Quantity : 3.59090E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 12:25:00.
Geometry : 1335L090904
BKGFILE : 13BG050506MT
Real Time : 0 02:41:51.55
Live time : 0 02:41:48.79

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	92.70*	12	375	1.30	185.39	1.52E+00	1.26E-03	23.6	1.68E+00
2	1	139.88*	86	262	1.26	279.71	2.02E+00	8.87E-03	35.2	1.47E+00
3	1	185.55*	0	305	1.31	371.01	1.95E+00	4.49E-05	*****	1.05E+00
4	1	198.20*	67	215	1.35	396.29	1.90E+00	6.94E-03	41.1	1.31E+00
5	0	238.25*	15	278	0.81	476.36	1.73E+00	1.57E-03	217.5	
6	1	295.28*	32	163	1.17	590.39	1.52E+00	3.32E-03	80.7	3.04E+00
7	1	351.49*	88	147	1.49	702.80	1.34E+00	9.04E-03	30.1	2.60E+00
8	1	583.57*	24	112	2.50	1167.03	9.26E-01	2.50E-03	106.5	1.58E+00
9	1	609.63*	79	107	2.01	1219.17	8.96E-01	8.09E-03	32.1	1.86E+00
10	1	1120.69*	40	24	2.56	2242.24	5.69E-01	4.12E-03	34.6	6.00E-01
11	1	1461.17*	29	33	2.49	2924.40	4.69E-01	3.02E-03	58.7	1.29E+00
12	1	1947.29	25	12	2.98	3899.14	3.86E-01	2.54E-03	29.4	1.04E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	29	10.67*	4.688E-01	4.542E+01	4.542E+01	117.39
RA-226	186.21	0	3.28*	1.947E+00	5.297E-01	5.297E-01	16102.71
TH-228	238.63	15	44.60*	1.734E+00	1.524E+00	1.536E+00	435.04
	240.98	------	3.95	1.723E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	0	54.00	1.947E+00	3.217E-02	3.217E-02	16102.71
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28777-7

Acquisition date : 1-JUN-2006 13:33:12

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.542E+01	4.542E+01	5.332E+01	117.39	
RA-226	1600.00Y	1.00	5.297E-01	5.297E-01	853.0E-01	16102.71	
TH-228	1.91Y	1.01	1.524E+00	1.536E+00	6.682E+00	435.04	
U-235	7.04E+08Y	1.00	3.217E-02	3.217E-02	518.1E-02	16102.71	K
			---------	---------			
	Total Activity :		4.751E+01	4.752E+01			

Grand Total Activity : 4.751E+01 4.752E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28777-7

Acquisition date : 1-JUN-2006 13:33:12

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	92.70	12	375	1.30	185.39	181	10	1.26E-03	****	1.52E+00	
1	139.88	86	262	1.26	279.71	276	8	8.87E-03	70.4	2.02E+00	
1	198.20	67	215	1.35	396.29	393	8	6.94E-03	82.2	1.90E+00	
1	295.28	32	163	1.17	590.39	587	10	3.32E-03	****	1.52E+00	
1	351.49	88	147	1.49	702.80	699	11	9.04E-03	60.2	1.34E+00	
1	583.57	24	112	2.50	1167.03	1160	17	2.50E-03	****	9.26E-01	T
1	609.63	79	107	2.01	1219.17	1213	14	8.09E-03	64.1	8.96E-01	
1	1120.69	40	24	2.56	2242.24	2235	16	4.12E-03	69.2	5.69E-01	
1	1947.29	25	12	2.98	3899.14	3895	10	2.54E-03	58.7	3.86E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.542E+01	4.542E+01	5.332E+01	117.39	
RA-226	1600.00Y	1.00	5.297E-01	5.297E-01	853.0E-01	16102.71	
TH-228	1.91Y	1.01	1.524E+00	1.536E+00	6.682E+00	435.04	
	Total Activity :		4.747E+01	4.749E+01			

Grand Total Activity : 4.747E+01 4.749E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.542E+01	5.332E+01	4.633E+01	0.000E+00	0.980
RA-226	5.297E-01	8.530E+01	1.187E+02	0.000E+00	0.004
TH-228	1.536E+00	6.682E+00	8.346E+00	0.000E+00	0.184

---- Non-Identified Nuclides ----

	Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided		(pCi/L)		
BE-7	4.601E-01	2.736E+01		4.474E+01	0.000E+00	0.010
NA-24	-6.690E-03	1.183E-02		Half-Life too short		
CR-51	-1.572E+01	3.103E+01		5.051E+01	0.000E+00	-0.311
MN-54	7.528E-01	3.245E+00		5.388E+00	0.000E+00	0.140
CO-57	-3.266E+00	3.060E+00		4.932E+00	0.000E+00	-0.662
CO-58	-1.448E+00	3.186E+00		5.035E+00	0.000E+00	-0.288
FE-59	1.225E+00	6.579E+00		1.102E+01	0.000E+00	0.111
CO-60	-2.506E-02	3.112E+00		5.071E+00	0.000E+00	-0.005
ZN-65	8.359E+00	7.263E+00		1.157E+01	0.000E+00	0.723
SE-75	1.635E-01	4.114E+00		6.681E+00	0.000E+00	0.024
SR-85	1.551E+01	3.995E+00		7.523E+00	0.000E+00	2.062
Y-88	1.653E+00	3.228E+00		5.618E+00	0.000E+00	0.294
NB-94	-6.695E-01	2.778E+00		4.507E+00	0.000E+00	-0.149
NB-95	1.150E+00	3.281E+00		5.515E+00	0.000E+00	0.209
ZR-95	-2.403E+00	6.204E+00		9.934E+00	0.000E+00	-0.242
MO-99	4.380E+01	1.826E+02		3.051E+02	0.000E+00	0.144
RU-103	7.526E-01	3.507E+00		5.788E+00	0.000E+00	0.130
RU-106	4.888E+00	2.828E+01		4.681E+01	0.000E+00	0.104
AG-110m	-5.989E-01	2.887E+00		4.713E+00	0.000E+00	-0.127
SN-113	6.407E-01	4.051E+00		6.731E+00	0.000E+00	0.095
SB-124	-4.193E+00	4.048E+00		5.203E+00	0.000E+00	-0.806
SB-125	-4.068E-01	9.155E+00		1.500E+01	0.000E+00	-0.027
TE-129M	2.690E+01	3.954E+01		6.710E+01	0.000E+00	0.401
I-131	1.738E+00	6.187E+00		1.037E+01	0.000E+00	0.168
BA-133	2.274E+00	5.076E+00		7.355E+00	0.000E+00	0.309
CS-134	2.723E+00	3.754E+00		5.596E+00	0.000E+00	0.487
CS-136	-3.207E+00	4.794E+00		7.463E+00	0.000E+00	-0.430
CS-137	1.459E+00	3.172E+00		5.408E+00	0.000E+00	0.270
CE-139	-2.647E+00	3.065E+00		4.913E+00	0.000E+00	-0.539
BA-140	-2.984E+00	1.642E+01		2.636E+01	0.000E+00	-0.113
LA-140	-4.153E+00	5.336E+00		8.053E+00	0.000E+00	-0.516
CE-141	5.411E+00	6.763E+00		9.929E+00	0.000E+00	0.545
CE-144	-1.133E+01	2.810E+01		3.921E+01	0.000E+00	-0.289
EU-152	-3.569E+00	1.126E+01		1.609E+01	0.000E+00	-0.222
EU-154	-7.637E+00	6.286E+00		1.008E+01	0.000E+00	-0.758
AC-228	-3.257E+00	1.202E+01		2.004E+01	0.000E+00	-0.162
TH-232	-3.248E+00	1.199E+01		1.999E+01	0.000E+00	-0.162
U-235	1.972E+00	2.682E+01		3.835E+01	0.000E+00	0.051
U-238	2.333E+02	3.379E+02		5.935E+02	0.000E+00	0.393
AM-241	-6.314E+01	2.954E+01		4.500E+01	0.000E+00	-1.403

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A,13L28777-7        ,06/01/2006 16:15,05/24/2006 12:25,   3.591E+00,L28777-7 WG EX
B,13L28777-7        ,LIBD                              ,06/01/2006 10:13,1335L090904
C,K-40      ,YES,    4.542E+01,   5.332E+01,   4.633E+01,,     0.980
C,RA-226    ,YES,    5.297E-01,   8.530E+01,   1.187E+02,,     0.004
C,TH-228    ,YES,    1.536E+00,   6.682E+00,   8.346E+00,,     0.184
C,BE-7      ,NO ,    4.601E-01,   2.736E+01,   4.474E+01,,     0.010
C,CR-51     ,NO ,   -1.572E+01,   3.103E+01,   5.051E+01,,    -0.311
C,MN-54     ,NO ,    7.528E-01,   3.245E+00,   5.388E+00,,     0.140
C,CO-57     ,NO ,   -3.266E+00,   3.060E+00,   4.932E+00,,    -0.662
C,CO-58     ,NO ,   -1.448E+00,   3.186E+00,   5.035E+00,,    -0.288
C,FE-59     ,NO ,    1.225E+00,   6.579E+00,   1.102E+01,,     0.111
C,CO-60     ,NO ,   -2.506E-02,   3.112E+00,   5.071E+00,,    -0.005
C,ZN-65     ,NO ,    8.359E+00,   7.263E+00,   1.157E+01,,     0.723
C,SE-75     ,NO ,    1.635E-01,   4.114E+00,   6.681E+00,,     0.024
C,SR-85     ,NO ,    1.551E+01,   3.995E+00,   7.523E+00,,     2.062
C,Y-88      ,NO ,    1.653E+00,   3.228E+00,   5.618E+00,,     0.294
C,NB-94     ,NO ,   -6.695E-01,   2.778E+00,   4.507E+00,,    -0.149
C,NB-95     ,NO ,    1.150E+00,   3.281E+00,   5.515E+00,,     0.209
C,ZR-95     ,NO ,   -2.403E+00,   6.204E+00,   9.934E+00,,    -0.242
C,MO-99     ,NO ,    4.380E+01,   1.826E+02,   3.051E+02,,     0.144
C,RU-103    ,NO ,    7.526E-01,   3.507E+00,   5.788E+00,,     0.130
C,RU-106    ,NO ,    4.888E+00,   2.828E+01,   4.681E+01,,     0.104
C,AG-110m   ,NO ,   -5.989E-01,   2.887E+00,   4.713E+00,,    -0.127
C,SN-113    ,NO ,    6.407E-01,   4.051E+00,   6.731E+00,,     0.095
C,SB-124    ,NO ,   -4.193E+00,   4.048E+00,   5.203E+00,,    -0.806
C,SB-125    ,NO ,   -4.068E-01,   9.155E+00,   1.500E+01,,    -0.027
C,TE-129M   ,NO ,    2.690E+01,   3.954E+01,   6.710E+01,,     0.401
C,I-131     ,NO ,    1.738E+00,   6.187E+00,   1.037E+01,,     0.168
C,BA-133    ,NO ,    2.274E+00,   5.076E+00,   7.355E+00,,     0.309
C,CS-134    ,NO ,    2.723E+00,   3.754E+00,   5.596E+00,,     0.487
C,CS-136    ,NO ,   -3.207E+00,   4.794E+00,   7.463E+00,,    -0.430
C,CS-137    ,NO ,    1.459E+00,   3.172E+00,   5.408E+00,,     0.270
C,CE-139    ,NO ,   -2.647E+00,   3.065E+00,   4.913E+00,,    -0.539
C,BA-140    ,NO ,   -2.984E+00,   1.642E+01,   2.636E+01,,    -0.113
C,LA-140    ,NO ,   -4.153E+00,   5.336E+00,   8.053E+00,,    -0.516
C,CE-141    ,NO ,    5.411E+00,   6.763E+00,   9.929E+00,,     0.545
C,CE-144    ,NO ,   -1.133E+01,   2.810E+01,   3.921E+01,,    -0.289
C,EU-152    ,NO ,   -3.569E+00,   1.126E+01,   1.609E+01,,    -0.222
C,EU-154    ,NO ,   -7.637E+00,   6.286E+00,   1.008E+01,,    -0.758
C,AC-228    ,NO ,   -3.257E+00,   1.202E+01,   2.004E+01,,    -0.162
C,TH-232    ,NO ,   -3.248E+00,   1.199E+01,   1.999E+01,,    -0.162
C,U-235     ,NO ,    1.972E+00,   2.682E+01,   3.835E+01,,     0.051
C,U-238     ,NO ,    2.333E+02,   3.379E+02,   5.935E+02,,     0.393
C,AM-241    ,NO ,   -6.314E+01,   2.954E+01,   4.500E+01,,    -1.403
```

Sec. Review: KDD Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 17:26:00.29
TBE23 03017322 HpGe ********** Aquisition Date/Time: 1-JUN-2006 14:28:31.94

LIMS No., Customer Name, Client ID: WG L28777-8 DRESDEN

Sample ID : 23L28777-8
Sample Type : WG
Quantity : 3.55010E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 14:15:00.
Geometry : 2335L090704
BKGFILE : 23BG050506MT
Real Time : 0 02:57:15.07
Live time : 0 02:57:07.59

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	63.65*	26	450	0.80	127.59	9.53E-01	2.40E-03	3156.5	
2	0	92.59*	56	479	1.05	185.41	1.69E+00	5.29E-03	76.0	
3	0	139.38*	69	354	1.11	278.93	2.05E+00	6.50E-03	48.0	
4	0	186.10*	29	435	1.09	372.30	1.95E+00	2.71E-03	3152.4	
5	0	351.76*	46	96	1.19	703.43	1.32E+00	4.34E-03	41.6	
6	0	596.11	45	67	1.43	1191.92	8.73E-01	4.27E-03	37.0	
7	0	609.02*	63	47	1.36	1217.71	8.59E-01	5.90E-03	26.6	
8	0	910.29*	46	35	1.52	1820.11	6.39E-01	4.33E-03	34.4	
9	0	1461.17*	23	26	1.38	2921.97	4.59E-01	2.17E-03	70.0	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	23	10.67*	4.594E-01	3.374E+01	3.374E+01	140.09
RA-226	186.21	29	3.28*	1.946E+00	3.234E+01	3.234E+01	304.71
AC-228	835.50	------	1.75	6.790E-01	------	Line Not Found	------
	911.07	46	27.70*	6.387E-01	1.861E+01	1.866E+01	68.85

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28777-8

Acquisition date : 1-JUN-2006 14:28:31

Total number of lines in spectrum	9	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	3	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.374E+01	3.374E+01	4.727E+01	140.09	
RA-226	1600.00Y	1.00	3.234E+01	3.234E+01	9.855E+01	304.71	
AC-228	5.75Y	1.00	1.861E+01	1.866E+01	1.285E+01	68.85	
	Total Activity :		8.470E+01	8.475E+01			

Grand Total Activity : 8.470E+01 8.475E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28777-8

Acquisition date : 1-JUN-2006 14:28:31

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	63.65	26	450	0.80	127.59	123	9	2.40E-03	****	9.53E-01	
0	92.59	56	479	1.05	185.41	181	9	5.29E-03	****	1.69E+00	
0	139.38	69	354	1.11	278.93	276	7	6.50E-03	96.0	2.05E+00	
0	351.76	46	96	1.19	703.43	700	7	4.34E-03	83.2	1.32E+00	
0	596.11	45	67	1.43	1191.92	1187	10	4.27E-03	73.9	8.73E-01	
0	609.02	63	47	1.36	1217.71	1213	9	5.90E-03	53.2	8.59E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	3	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.374E+01	3.374E+01	4.727E+01	140.09	
RA-226	1600.00Y	1.00	3.234E+01	3.234E+01	9.855E+01	304.71	
AC-228	5.75Y	1.00	1.861E+01	1.866E+01	1.285E+01	68.85	
			---------	---------			
	Total Activity :		8.470E+01	8.475E+01			

Grand Total Activity : 8.470E+01 8.475E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.374E+01	4.727E+01	5.409E+01	0.000E+00	0.624
RA-226	3.234E+01	9.855E+01	1.335E+02	0.000E+00	0.242
AC-228	1.866E+01	1.285E+01	1.845E+01	0.000E+00	1.012

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MD
BE-7	-3.787E+00		2.808E+01	4.752E+01	0.000E+00	-0.08

NA-24	3.291E-03		1.221E-02	Half-Life too short		
CR-51	-3.070E+01		3.187E+01	5.250E+01	0.000E+00	-0.585
MN-54	1.177E+00		3.086E+00	5.482E+00	0.000E+00	0.215
CO-57	-1.146E+00		3.619E+00	6.047E+00	0.000E+00	-0.190
CO-58	-1.312E+00		3.199E+00	5.399E+00	0.000E+00	-0.243
FE-59	2.006E+00		5.854E+00	1.067E+01	0.000E+00	0.188
CO-60	-1.292E+00		2.724E+00	4.629E+00	0.000E+00	-0.279
ZN-65	1.549E+00		6.255E+00	1.127E+01	0.000E+00	0.137
SE-75	-2.664E+00		4.456E+00	7.486E+00	0.000E+00	-0.356
SR-85	1.503E+01		3.767E+00	7.353E+00	0.000E+00	2.044
Y-88	-1.970E+00		3.244E+00	5.471E+00	0.000E+00	-0.360
NB-94	8.138E-01		3.007E+00	5.297E+00	0.000E+00	0.154
NB-95	2.373E+00		3.291E+00	5.957E+00	0.000E+00	0.398
ZR-95	-2.489E+00		5.526E+00	9.330E+00	0.000E+00	-0.267
MO-99	-1.587E+02		1.603E+02	2.603E+02	0.000E+00	-0.610
RU-103	-1.737E-01		3.574E+00	6.064E+00	0.000E+00	-0.029
RU-106	1.973E+01		2.791E+01	5.064E+01	0.000E+00	0.390
AG-110m	-9.812E-01		2.917E+00	4.984E+00	0.000E+00	-0.197
SN-113	1.512E+00		4.260E+00	7.377E+00	0.000E+00	0.205
SB-124	3.751E+00		6.301E+00	5.457E+00	0.000E+00	0.687
SB-125	6.233E+00		8.849E+00	1.560E+01	0.000E+00	0.400
TE-129M	-8.617E+00		4.126E+01	6.955E+01	0.000E+00	-0.124
I-131	3.798E+00		6.251E+00	1.095E+01	0.000E+00	0.347
BA-133	2.666E+00		5.096E+00	7.598E+00	0.000E+00	0.351
CS-134	8.082E+00		5.388E+00	6.078E+00	0.000E+00	1.330
CS-136	-3.606E-01		4.281E+00	7.408E+00	0.000E+00	-0.049
CS-137	1.604E-01		3.111E+00	5.450E+00	0.000E+00	0.029
CE-139	1.291E-01		3.577E+00	5.994E+00	0.000E+00	0.022
BA-140	1.802E+01		1.706E+01	3.064E+01	0.000E+00	0.588
LA-140	1.147E+00		5.241E+00	9.618E+00	0.000E+00	0.119
CE-141	4.346E+00		8.032E+00	1.167E+01	0.000E+00	0.372
CE-144	-3.121E+01		3.324E+01	4.584E+01	0.000E+00	-0.681
EU-152	-1.003E+01		1.122E+01	1.586E+01	0.000E+00	-0.632
EU-154	-1.300E+00		7.444E+00	1.248E+01	0.000E+00	-0.104
TH-228	4.846E+00		6.345E+00	1.089E+01	0.000E+00	0.445
TH-232	1.861E+01	+	1.282E+01	2.122E+01	0.000E+00	0.877
U-235	1.355E+01		3.159E+01	4.580E+01	0.000E+00	0.296
U-238	-1.147E+01		3.159E+02	5.589E+02	0.000E+00	-0.021
AM-241	7.480E+00		2.129E+01	3.036E+01	0.000E+00	0.246

A,23L28777-8 ,06/01/2006 17:26,05/24/2006 14:15, 3.550E+00,WG L28777-8 DR
B,23L28777-8 ,LIBD ,06/01/2006 10:14,2335L090704

C,K-40	,YES,	3.374E+01,	4.727E+01,	5.409E+01,,	0.624
C,RA-226	,YES,	3.234E+01,	9.855E+01,	1.335E+02,,	0.242
C,AC-228	,YES,	1.866E+01,	1.285E+01,	1.845E+01,,	1.012
C,BE-7	,NO ,	-3.787E+00,	2.808E+01,	4.752E+01,,	-0.080
C,CR-51	,NO ,	-3.070E+01,	3.187E+01,	5.250E+01,,	-0.585
C,MN-54	,NO ,	1.177E+00,	3.086E+00,	5.482E+00,,	0.215
C,CO-57	,NO ,	-1.146E+00,	3.619E+00,	6.047E+00,,	-0.190
C,CO-58	,NO ,	-1.312E+00,	3.199E+00,	5.399E+00,,	-0.243
C,FE-59	,NO ,	2.006E+00,	5.854E+00,	1.067E+01,,	0.188
C,CO-60	,NO ,	-1.292E+00,	2.724E+00,	4.629E+00,,	-0.279
C,ZN-65	,NO ,	1.549E+00,	6.255E+00,	1.127E+01,,	0.137
C,SE-75	,NO ,	-2.664E+00,	4.456E+00,	7.486E+00,,	-0.356
C,SR-85	,NO ,	1.503E+01,	3.767E+00,	7.353E+00,,	2.044
C,Y-88	,NO ,	-1.970E+00,	3.244E+00,	5.471E+00,,	-0.360
C,NB-94	,NO ,	8.138E-01,	3.007E+00,	5.297E+00,,	0.154
C,NB-95	,NO ,	2.373E+00,	3.291E+00,	5.957E+00,,	0.398
C,ZR-95	,NO ,	-2.489E+00,	5.526E+00,	9.330E+00,,	-0.267
C,MO-99	,NO ,	-1.587E+02,	1.603E+02,	2.603E+02,,	-0.610
C,RU-103	,NO ,	-1.737E-01,	3.574E+00,	6.064E+00,,	-0.029
C,RU-106	,NO ,	1.973E+01,	2.791E+01,	5.064E+01,,	0.390
C,AG-110m	,NO ,	-9.812E-01,	2.917E+00,	4.984E+00,,	-0.197
C,SN-113	,NO ,	1.512E+00,	4.260E+00,	7.377E+00,,	0.205
C,SB-124	,NO ,	3.751E+00,	6.301E+00,	5.457E+00,,	0.687
C,SB-125	,NO ,	6.233E+00,	8.849E+00,	1.560E+01,,	0.400
C,TE-129M	,NO ,	-8.617E+00,	4.126E+01,	6.955E+01,,	-0.124
C,I-131	,NO ,	3.798E+00,	6.251E+00,	1.095E+01,,	0.347
C,BA-133	,NO ,	2.666E+00,	5.096E+00,	7.598E+00,,	0.351
C,CS-134	,NO ,	8.082E+00,	5.388E+00,	6.078E+00,,	1.330
C,CS-136	,NO ,	-3.606E-01,	4.281E+00,	7.408E+00,,	-0.049
C,CS-137	,NO ,	1.604E-01,	3.111E+00,	5.450E+00,,	0.029
C,CE-139	,NO ,	1.291E-01,	3.577E+00,	5.994E+00,,	0.022
C,BA-140	,NO ,	1.802E+01,	1.706E+01,	3.064E+01,,	0.588
C,LA-140	,NO ,	1.147E+00,	5.241E+00,	9.618E+00,,	0.119
C,CE-141	,NO ,	4.346E+00,	8.032E+00,	1.167E+01,,	0.372
C,CE-144	,NO ,	-3.121E+01,	3.324E+01,	4.584E+01,,	-0.681
C,EU-152	,NO ,	-1.003E+01,	1.122E+01,	1.586E+01,,	-0.632
C,EU-154	,NO ,	-1.300E+00,	7.444E+00,	1.248E+01,,	-0.104
C,TH-228	,NO ,	4.846E+00,	6.345E+00,	1.089E+01,,	0.445
C,TH-232	,NO ,	1.861E+01,	1.282E+01,	2.122E+01,,	0.877
C,U-235	,NO ,	1.355E+01,	3.159E+01,	4.580E+01,,	0.296
C,U-238	,NO ,	-1.147E+01,	3.159E+02,	5.589E+02,,	-0.021
C,AM-241	,NO ,	7.480E+00,	2.129E+01,	3.036E+01,,	0.246

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 17:26:07.58
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 1-JUN-2006 14:33:49.16

LIMS No., Customer Name, Client ID: WG L28777-9 DRESDEN

Sample ID : 04L28777-9
Sample Type : WG
Quantity : 3.50310E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 17:05:00.
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 02:52:13.04
Live time : 0 02:52:11.29

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.26*	65	236	1.44	133.09	6.46E-01	6.26E-03	42.3	2.05E+00
2	1	139.67*	63	238	1.56	279.93	1.82E+00	6.08E-03	47.4	9.78E-01
3	1	185.80*	28	174	1.38	372.19	1.73E+00	2.66E-03	91.2	1.38E+00
4	1	198.43*	109	239	2.44	397.46	1.68E+00	1.06E-02	30.3	9.40E-01
5	1	238.37*	5	147	1.36	477.36	1.52E+00	5.15E-04	438.3	2.61E+00
6	1	295.18*	43	79	0.97	590.97	1.32E+00	4.16E-03	40.2	3.31E+00
7	1	351.91*	30	104	1.17	704.45	1.17E+00	2.87E-03	68.4	1.71E+00
8	1	583.24*	1	63	1.93	1167.09	7.99E-01	6.39E-05	*****	1.66E+00
9	1	595.85	38	51	1.86	1192.31	7.86E-01	3.70E-03	41.1	4.44E-01
10	1	609.19*	20	65	1.64	1218.99	7.73E-01	1.89E-03	88.4	1.45E+00
11	1	1460.34*	11	16	2.45	2920.88	3.92E-01	1.10E-03	109.3	1.20E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	11	10.67*	3.921E-01	2.036E+01	2.036E+01	218.56
RA-226	186.21	28	3.28*	1.727E+00	3.627E+01	3.627E+01	182.30
TH-228	238.63	5	44.60*	1.521E+00	5.860E-01	5.907E-01	876.50
	240.98	------	3.95	1.511E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.822E+00	------	Line Not Found	------
	163.35	------	4.70	1.796E+00	------	Line Not Found	------
	185.71	28	54.00	1.727E+00	2.203E+00	2.203E+00	182.30
	205.31	------	4.70	1.652E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28777-9

Acquisition date : 1-JUN-2006 14:33:49

Total number of lines in spectrum	11	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	4	36.36%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.036E+01	2.036E+01	4.449E+01	218.56	
RA-226	1600.00Y	1.00	3.627E+01	3.627E+01	6.612E+01	182.30	
TH-228	1.91Y	1.01	5.860E-01	5.907E-01	51.77E-01	876.50	
U-235	7.04E+08Y	1.00	2.203E+00	2.203E+00	4.016E+00	182.30	K
			---------	---------			
	Total Activity :		5.941E+01	5.942E+01			
	Grand Total Activity :		5.941E+01	5.942E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28777-9

Acquisition date : 1-JUN-2006 14:33:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.26	65	236	1.44	133.09	130	7	6.26E-03	84.6	6.46E-01	
1	139.67	63	238	1.56	279.93	275	9	6.08E-03	94.8	1.82E+00	
1	198.43	109	239	2.44	397.46	392	12	1.06E-02	60.6	1.68E+00	
1	295.18	43	79	0.97	590.97	587	7	4.16E-03	80.5	1.32E+00	
1	351.91	30	104	1.17	704.45	700	9	2.87E-03	****	1.17E+00	
1	583.24	1	63	1.93	1167.09	1161	13	6.39E-05	****	7.99E-01	T
1	595.85	38	51	1.86	1192.31	1187	12	3.70E-03	82.1	7.86E-01	
1	609.19	20	65	1.64	1218.99	1214	10	1.89E-03	****	7.73E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	4	36.36%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.036E+01	2.036E+01	4.449E+01	218.56	
RA-226	1600.00Y	1.00	3.627E+01	3.627E+01	6.612E+01	182.30	
TH-228	1.91Y	1.01	5.860E-01	5.907E-01	51.77E-01	876.50	
	Total Activity :		5.721E+01	5.722E+01			

Grand Total Activity : 5.721E+01 5.722E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.036E+01	4.449E+01	4.808E+01	0.000E+00	0.423
RA-226	3.627E+01	6.612E+01	1.111E+02	0.000E+00	0.327
TH-228	5.907E-01	5.177E+00	8.473E+00	0.000E+00	0.070

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	1.603E+01	2.626E+01	4.463E+01	0.000E+00	0.359
NA-24	-1.233E-02	1.228E-02	Half-Life too short		
CR-51	-1.455E+01	2.992E+01	4.742E+01	0.000E+00	-0.307
MN-54	2.208E+00	3.000E+00	5.253E+00	0.000E+00	0.420
CO-57	-2.183E-01	2.679E+00	4.433E+00	0.000E+00	-0.049
CO-58	5.008E-01	3.311E+00	5.553E+00	0.000E+00	0.090
FE-59	1.849E+00	6.533E+00	1.109E+01	0.000E+00	0.167
CO-60	-9.560E-02	3.566E+00	6.097E+00	0.000E+00	-0.016
ZN-65	7.941E-02	7.166E+00	1.186E+01	0.000E+00	0.007
SE-75	1.869E+00	4.123E+00	6.927E+00	0.000E+00	0.270
SR-85	1.593E+01	4.095E+00	7.790E+00	0.000E+00	2.045
Y-88	1.755E+00	3.304E+00	5.841E+00	0.000E+00	0.300
NB-94	-2.023E-01	2.932E+00	4.766E+00	0.000E+00	-0.042
NB-95	9.950E-01	3.178E+00	5.289E+00	0.000E+00	0.188
ZR-95	-1.581E+00	5.632E+00	8.927E+00	0.000E+00	-0.177
MO-99	1.155E+01	1.608E+02	2.632E+02	0.000E+00	0.044
RU-103	1.378E+00	3.200E+00	5.368E+00	0.000E+00	0.257
RU-106	2.404E+01	2.930E+01	5.099E+01	0.000E+00	0.472
AG-110m	2.482E+00	3.015E+00	5.244E+00	0.000E+00	0.473
SN-113	3.244E-01	3.882E+00	6.467E+00	0.000E+00	0.050
SB-124	2.112E+00	6.670E+00	5.382E+00	0.000E+00	0.392
SB-125	-6.940E+00	8.546E+00	1.339E+01	0.000E+00	-0.518
TE-129M	-1.786E+00	3.962E+01	6.476E+01	0.000E+00	-0.028
I-131	-1.991E+00	5.617E+00	9.179E+00	0.000E+00	-0.217
BA-133	3.906E+00	4.732E+00	7.141E+00	0.000E+00	0.547
CS-134	3.682E+00	5.616E+00	5.619E+00	0.000E+00	0.655
CS-136	3.051E+00	4.507E+00	7.859E+00	0.000E+00	0.388
CS-137	-4.108E-01	3.337E+00	5.429E+00	0.000E+00	-0.076
CE-139	-4.496E+00	2.794E+00	4.256E+00	0.000E+00	-1.056
BA-140	5.411E+00	1.521E+01	2.528E+01	0.000E+00	0.214
LA-140	2.790E+00	5.568E+00	9.642E+00	0.000E+00	0.289
CE-141	3.583E+00	6.522E+00	9.466E+00	0.000E+00	0.379
CE-144	-4.568E+00	2.464E+01	3.463E+01	0.000E+00	-0.132
EU-152	-1.112E+01	1.108E+01	1.464E+01	0.000E+00	-0.760
EU-154	-1.390E+00	5.558E+00	9.135E+00	0.000E+00	-0.152
AC-228	1.291E+00	1.237E+01	2.134E+01	0.000E+00	0.061
TH-232	1.288E+00	1.234E+01	2.128E+01	0.000E+00	0.061
U-235	8.346E+00	2.526E+01	3.629E+01	0.000E+00	0.230
U-238	-4.635E+01	3.637E+02	5.858E+02	0.000E+00	-0.079
AM-241	-2.644E+01	2.642E+01	4.044E+01	0.000E+00	-0.654

A,04L28777-9 ,06/01/2006 17:26,05/24/2006 17:05, 3.503E+00,WG L28777-9 DR
B,04L28777-9 ,LIBD ,03/14/2005 09:04,0435L090804

C,K-40	,YES,	2.036E+01,	4.449E+01,	4.808E+01,,	0.423
C,RA-226	,YES,	3.627E+01,	6.612E+01,	1.111E+02,,	0.327
C,TH-228	,YES,	5.907E-01,	5.177E+00,	8.473E+00,,	0.070
C,BE-7	,NO ,	1.603E+01,	2.626E+01,	4.463E+01,,	0.359
C,CR-51	,NO ,	-1.455E+01,	2.992E+01,	4.742E+01,,	-0.307
C,MN-54	,NO ,	2.208E+00,	3.000E+00,	5.253E+00,,	0.420
C,CO-57	,NO ,	-2.183E-01,	2.679E+00,	4.433E+00,,	-0.049
C,CO-58	,NO ,	5.008E-01,	3.311E+00,	5.553E+00,,	0.090
C,FE-59	,NO ,	1.849E+00,	6.533E+00,	1.109E+01,,	0.167
C,CO-60	,NO ,	-9.560E-02,	3.566E+00,	6.097E+00,,	-0.016
C,ZN-65	,NO ,	7.941E-02,	7.166E+00,	1.186E+01,,	0.007
C,SE-75	,NO ,	1.869E+00,	4.123E+00,	6.927E+00,,	0.270
C,SR-85	,NO ,	1.593E+01,	4.095E+00,	7.790E+00,,	2.045
C,Y-88	,NO ,	1.755E+00,	3.304E+00,	5.841E+00,,	0.300
C,NB-94	,NO ,	-2.023E-01,	2.932E+00,	4.766E+00,,	-0.042
C,NB-95	,NO ,	9.950E-01,	3.178E+00,	5.289E+00,,	0.188
C,ZR-95	,NO ,	-1.581E+00,	5.632E+00,	8.927E+00,,	-0.177
C,MO-99	,NO ,	1.155E+01,	1.608E+02,	2.632E+02,,	0.044
C,RU-103	,NO ,	1.378E+00,	3.200E+00,	5.368E+00,,	0.257
C,RU-106	,NO ,	2.404E+01,	2.930E+01,	5.099E+01,,	0.472
C,AG-110m	,NO ,	2.482E+00,	3.015E+00,	5.244E+00,,	0.473
C,SN-113	,NO ,	3.244E-01,	3.882E+00,	6.467E+00,,	0.050
C,SB-124	,NO ,	2.112E+00,	6.670E+00,	5.382E+00,,	0.392
C,SB-125	,NO ,	-6.940E+00,	8.546E+00,	1.339E+01,,	-0.518
C,TE-129M	,NO ,	-1.786E+00,	3.962E+01,	6.476E+01,,	-0.028
C,I-131	,NO ,	-1.991E+00,	5.617E+00,	9.179E+00,,	-0.217
C,BA-133	,NO ,	3.906E+00,	4.732E+00,	7.141E+00,,	0.547
C,CS-134	,NO ,	3.682E+00,	5.616E+00,	5.619E+00,,	0.655
C,CS-136	,NO ,	3.051E+00,	4.507E+00,	7.859E+00,,	0.388
C,CS-137	,NO ,	-4.108E-01,	3.337E+00,	5.429E+00,,	-0.076
C,CE-139	,NO ,	-4.496E+00,	2.794E+00,	4.256E+00,,	-1.056
C,BA-140	,NO ,	5.411E+00,	1.521E+01,	2.528E+01,,	0.214
C,LA-140	,NO ,	2.790E+00,	5.568E+00,	9.642E+00,,	0.289
C,CE-141	,NO ,	3.583E+00,	6.522E+00,	9.466E+00,,	0.379
C,CE-144	,NO ,	-4.568E+00,	2.464E+01,	3.463E+01,,	-0.132
C,EU-152	,NO ,	-1.112E+01,	1.108E+01,	1.464E+01,,	-0.760
C,EU-154	,NO ,	-1.390E+00,	5.558E+00,	9.135E+00,,	-0.152
C,AC-228	,NO ,	1.291E+00,	1.237E+01,	2.134E+01,,	0.061
C,TH-232	,NO ,	1.288E+00,	1.234E+01,	2.128E+01,,	0.061
C,U-235	,NO ,	8.346E+00,	2.526E+01,	3.629E+01,,	0.230
C,U-238	,NO ,	-4.635E+01,	3.637E+02,	5.858E+02,,	-0.079
C,AM-241	,NO ,	-2.644E+01,	2.642E+01,	4.044E+01,,	-0.654

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 19:44:25.77
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 1-JUN-2006 16:17:15.09

LIMS No., Customer Name, Client ID: WG L28777-10 DRESDEN

Sample ID : 13L28777-10
Sample Type : WG
Quantity : 3.42300E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 11:37:00.
Geometry : 1335L090904
BKGFILE : 13BG050506MT
Real Time : 0 03:27:02.90
Live time : 0 03:26:59.36

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	63.26*	16	343	1.03	126.56	6.19E-01	1.25E-03	3203.2	2.32E+00
2	1	66.05*	85	391	1.63	132.13	7.15E-01	6.82E-03	41.2	1.90E+00
3	3	77.34*	76	514	1.40	154.70	1.10E+00	6.13E-03	58.1	6.59E+00
4	1	92.73*	9	491	1.30	185.46	1.52E+00	7.57E-04	484.6	1.01E+00
5	1	140.02*	34	414	1.01	279.98	2.02E+00	2.71E-03	110.6	3.81E+00
6	1	185.63*	5	418	1.69	371.15	1.95E+00	4.23E-04	819.9	3.42E+00
7	1	198.07*	77	339	1.33	396.03	1.90E+00	6.19E-03	43.8	7.63E-01
8	1	295.26*	94	201	1.06	590.36	1.52E+00	7.56E-03	29.3	1.33E+00
9	1	351.99*	214	216	1.30	703.79	1.34E+00	1.73E-02	16.3	1.71E+00
10	1	595.55	55	68	1.59	1190.99	9.12E-01	4.41E-03	29.2	1.80E+00
11	1	609.22*	217	140	1.62	1218.35	8.96E-01	1.75E-02	14.7	5.86E-01
12	1	912.32*	177	58	1.25	1824.99	6.63E-01	1.42E-02	9.9	2.52E+02
13	1	1120.77*	33	52	1.23	2242.40	5.69E-01	2.65E-03	48.1	1.33E+00
14	1	1461.13*	51	12	2.32	2924.31	4.69E-01	4.08E-03	32.9	6.84E-01
15	1	1744.76	51	5	8.13	3492.92	4.14E-01	4.09E-03	15.1	1.08E+00
16	1	1764.55*	24	35	2.74	3532.62	4.11E-01	1.97E-03	62.9	1.48E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	51	10.67*	4.688E-01	6.441E+01	6.441E+01	65.72
RA-226	186.21	5	3.28*	1.947E+00	5.236E+00	5.236E+00	1639.72
AC-228	835.50	------	1.75	7.084E-01	------	Line Not Found	------
	911.07	177	27.70*	6.634E-01	6.115E+01	6.132E+01	19.75
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	5	54.00	1.947E+00	3.180E-01	3.180E-01	1639.72
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28777-10

Acquisition date : 1-JUN-2006 16:17:15

Total number of lines in spectrum	16	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	3	18.75%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.441E+01	6.441E+01	4.233E+01	65.72	
RA-226	1600.00Y	1.00	5.236E+00	5.236E+00	85.86E+00	1639.72	
AC-228	5.75Y	1.00	6.115E+01	6.132E+01	1.211E+01	19.75	
U-235	7.04E+08Y	1.00	3.180E-01	3.180E-01	52.15E-01	1639.72	K
			---------	---------			
	Total Activity :		1.311E+02	1.313E+02			

Grand Total Activity : 1.311E+02 1.313E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28777-10

Acquisition date : 1-JUN-2006 16:17:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	63.26	16	343	1.03	126.56	124	6	1.25E-03	****	6.19E-01	
1	66.05	85	391	1.63	132.13	130	7	6.82E-03	82.3	7.15E-01	
3	77.34	76	514	1.40	154.70	147	12	6.13E-03	****	1.10E+00	
1	92.73	9	491	1.30	185.46	181	10	7.57E-04	****	1.52E+00	
1	140.02	34	414	1.01	279.98	276	8	2.71E-03	****	2.02E+00	
1	198.07	77	339	1.33	396.03	393	8	6.19E-03	87.5	1.90E+00	
1	295.26	94	201	1.06	590.36	588	8	7.56E-03	58.7	1.52E+00	
1	351.99	214	216	1.30	703.79	698	12	1.73E-02	32.6	1.34E+00	
1	595.55	55	68	1.59	1190.99	1187	8	4.41E-03	58.5	9.12E-01	
1	609.22	217	140	1.62	1218.35	1211	16	1.75E-02	29.5	8.96E-01	
1	1120.77	33	52	1.23	2242.40	2238	10	2.65E-03	96.2	5.69E-01	
1	1744.76	51	5	8.13	3492.92	3487	18	4.09E-03	30.3	4.14E-01	
1	1764.55	24	35	2.74	3532.62	3527	16	1.97E-03	****	4.11E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	16	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	3	18.75%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.441E+01	6.441E+01	4.233E+01	65.72	
RA-226	1600.00Y	1.00	5.236E+00	5.236E+00	85.86E+00	1639.72	
AC-228	5.75Y	1.00	6.115E+01	6.132E+01	1.211E+01	19.75	
	Total Activity :		1.308E+02	1.310E+02			

Grand Total Activity : 1.308E+02 1.310E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.441E+01	4.233E+01	4.014E+01	0.000E+00	1.605
RA-226	5.236E+00	8.586E+01	1.133E+02	0.000E+00	0.046
AC-228	6.132E+01	1.211E+01	1.598E+01	0.000E+00	3.838

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.212E+01		2.667E+01	4.452E+01	0.000E+00	0.272
NA-24	-2.331E-02		1.488E-02	Half-Life too short		
CR-51	-2.928E+01		2.860E+01	4.573E+01	0.000E+00	-0.640
MN-54	-7.312E-01		2.898E+00	4.657E+00	0.000E+00	-0.157
CO-57	1.766E+00		2.885E+00	4.879E+00	0.000E+00	0.362
CO-58	9.214E-02		3.123E+00	5.120E+00	0.000E+00	0.018
FE-59	3.059E+00		6.005E+00	1.027E+01	0.000E+00	0.298
CO-60	-7.759E-01		2.858E+00	4.543E+00	0.000E+00	-0.171
ZN-65	5.831E+00		7.336E+00	1.106E+01	0.000E+00	0.527
SE-75	-4.244E-02		4.041E+00	6.548E+00	0.000E+00	-0.006
SR-85	2.023E+01		3.857E+00	7.399E+00	0.000E+00	2.734
Y-88	-3.912E+00		3.453E+00	4.967E+00	0.000E+00	-0.788
NB-94	-2.141E+00		2.863E+00	4.528E+00	0.000E+00	-0.473
NB-95	3.640E+00		3.222E+00	5.623E+00	0.000E+00	0.647
ZR-95	-5.296E+00		5.760E+00	8.950E+00	0.000E+00	-0.592
MO-99	-1.598E+02		1.638E+02	2.524E+02	0.000E+00	-0.633
RU-103	1.440E+00		3.229E+00	5.383E+00	0.000E+00	0.268
RU-106	4.995E+00		2.665E+01	4.409E+01	0.000E+00	0.113
AG-110m	-1.464E+00		2.842E+00	4.569E+00	0.000E+00	-0.320
SN-113	3.782E+00		3.809E+00	6.543E+00	0.000E+00	0.578
SB-124	-8.206E-01		5.618E+00	4.915E+00	0.000E+00	-0.167
SB-125	3.493E+00		8.397E+00	1.404E+01	0.000E+00	0.249
TE-129M	-1.381E+01		3.896E+01	6.270E+01	0.000E+00	-0.220
I-131	6.666E-01		5.801E+00	9.641E+00	0.000E+00	0.069
BA-133	8.368E+00		4.719E+00	7.298E+00	0.000E+00	1.147
CS-134	5.237E+00		3.992E+00	5.548E+00	0.000E+00	0.944
CS-136	7.931E-01		4.360E+00	7.215E+00	0.000E+00	0.110
CS-137	5.290E+00		3.080E+00	5.567E+00	0.000E+00	0.950
CE-139	1.762E+00		2.963E+00	4.967E+00	0.000E+00	0.355
BA-140	-4.547E+00		1.573E+01	2.514E+01	0.000E+00	-0.181
LA-140	6.738E+00		4.562E+00	8.592E+00	0.000E+00	0.784
CE-141	3.310E+00		6.641E+00	9.586E+00	0.000E+00	0.345
CE-144	1.032E+01		2.607E+01	3.760E+01	0.000E+00	0.275
EU-152	-9.338E+00		1.109E+01	1.490E+01	0.000E+00	-0.627
EU-154	1.410E+00		5.939E+00	9.949E+00	0.000E+00	0.142
TH-228	3.682E+00		5.831E+00	9.923E+00	0.000E+00	0.371
TH-232	6.115E+01	+	1.208E+01	1.816E+01	0.000E+00	3.366
U-235	1.429E+01		2.597E+01	3.768E+01	0.000E+00	0.379
U-238	-1.410E+02		3.253E+02	5.234E+02	0.000E+00	-0.269
AM-241	2.831E+01		2.951E+01	4.296E+01	0.000E+00	0.659

```
A,13L28777-10      ,06/01/2006 19:44,05/24/2006 11:37,   3.423E+00,WG L28777-10 D
B,13L28777-10      ,LIBD                ,06/01/2006 10:13,1335L090904
C,K-40     ,YES,    6.441E+01,    4.233E+01,    4.014E+01,,     1.605
C,RA-226   ,YES,    5.236E+00,    8.586E+01,    1.133E+02,,     0.046
C,AC-228   ,YES,    6.132E+01,    1.211E+01,    1.598E+01,,     3.838
C,BE-7     ,NO ,    1.212E+01,    2.667E+01,    4.452E+01,,     0.272
C,CR-51    ,NO ,   -2.928E+01,    2.860E+01,    4.573E+01,,    -0.640
C,MN-54    ,NO ,   -7.312E-01,    2.898E+00,    4.657E+00,,    -0.157
C,CO-57    ,NO ,    1.766E+00,    2.885E+00,    4.879E+00,,     0.362
C,CO-58    ,NO ,    9.214E-02,    3.123E+00,    5.120E+00,,     0.018
C,FE-59    ,NO ,    3.059E+00,    6.005E+00,    1.027E+01,,     0.298
C,CO-60    ,NO ,   -7.759E-01,    2.858E+00,    4.543E+00,,    -0.171
C,ZN-65    ,NO ,    5.831E+00,    7.336E+00,    1.106E+01,,     0.527
C,SE-75    ,NO ,   -4.244E-02,    4.041E+00,    6.548E+00,,    -0.006
C,SR-85    ,NO ,    2.023E+01,    3.857E+00,    7.399E+00,,     2.734
C,Y-88     ,NO ,   -3.912E+00,    3.453E+00,    4.967E+00,,    -0.788
C,NB-94    ,NO ,   -2.141E+00,    2.863E+00,    4.528E+00,,    -0.473
C,NB-95    ,NO ,    3.640E+00,    3.222E+00,    5.623E+00,,     0.647
C,ZR-95    ,NO ,   -5.296E+00,    5.760E+00,    8.950E+00,,    -0.592
C,MO-99    ,NO ,   -1.598E+02,    1.638E+02,    2.524E+02,,    -0.633
C,RU-103   ,NO ,    1.440E+00,    3.229E+00,    5.383E+00,,     0.268
C,RU-106   ,NO ,    4.995E+00,    2.665E+01,    4.409E+01,,     0.113
C,AG-110m  ,NO ,   -1.464E+00,    2.842E+00,    4.569E+00,,    -0.320
C,SN-113   ,NO ,    3.782E+00,    3.809E+00,    6.543E+00,,     0.578
C,SB-124   ,NO ,   -8.206E-01,    5.618E+00,    4.915E+00,,    -0.167
C,SB-125   ,NO ,    3.493E+00,    8.397E+00,    1.404E+01,,     0.249
C,TE-129M  ,NO ,   -1.381E+01,    3.896E+01,    6.270E+01,,    -0.220
C,I-131    ,NO ,    6.666E-01,    5.801E+00,    9.641E+00,,     0.069
C,BA-133   ,NO ,    8.368E+00,    4.719E+00,    7.298E+00,,     1.147
C,CS-134   ,NO ,    5.237E+00,    3.992E+00,    5.548E+00,,     0.944
C,CS-136   ,NO ,    7.931E-01,    4.360E+00,    7.215E+00,,     0.110
C,CS-137   ,NO ,    5.290E+00,    3.080E+00,    5.567E+00,,     0.950
C,CE-139   ,NO ,    1.762E+00,    2.963E+00,    4.967E+00,,     0.355
C,BA-140   ,NO ,   -4.547E+00,    1.573E+01,    2.514E+01,,    -0.181
C,LA-140   ,NO ,    6.738E+00,    4.562E+00,    8.592E+00,,     0.784
C,CE-141   ,NO ,    3.310E+00,    6.641E+00,    9.586E+00,,     0.345
C,CE-144   ,NO ,    1.032E+01,    2.607E+01,    3.760E+01,,     0.275
C,EU-152   ,NO ,   -9.338E+00,    1.109E+01,    1.490E+01,,    -0.627
C,EU-154   ,NO ,    1.410E+00,    5.939E+00,    9.949E+00,,     0.142
C,TH-228   ,NO ,    3.682E+00,    5.831E+00,    9.923E+00,,     0.371
C,TH-232   ,NO ,    6.115E+01,    1.208E+01,    1.816E+01,,     3.366
C,U-235    ,NO ,    1.429E+01,    2.597E+01,    3.768E+01,,     0.379
C,U-238    ,NO ,   -1.410E+02,    3.253E+02,    5.234E+02,,    -0.269
C,AM-241   ,NO ,    2.831E+01,    2.951E+01,    4.296E+01,,     0.659
```

Sec. Review: Analyst: KDS LIMS: C

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 20:20:50.53
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 1-JUN-2006 17:27:53.46

LIMS No., Customer Name, Client ID: WG L28777-11 DRESDEN

Sample ID : 04L28777-11
Sample Type : WG
Quantity : 3.48290E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 13:20:00.
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 02:52:52.35
Live time : 0 02:52:50.58

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	84.27*	6	223	1.38	169.10	1.19E+00	6.08E-04	421.6	9.45E-01
2	1	92.93*	36	281	1.89	186.44	1.40E+00	3.44E-03	95.5	1.84E+00
3	1	139.89*	55	257	1.34	280.38	1.82E+00	5.30E-03	56.0	2.35E+00
4	1	198.25*	127	189	3.41	397.10	1.68E+00	1.23E-02	21.3	6.49E+00
5	1	238.66*	12	161	0.85	477.94	1.52E+00	1.16E-03	191.8	1.16E+00
6	1	294.90*	41	135	1.74	590.42	1.32E+00	3.96E-03	55.4	1.05E+00
7	1	351.33*	33	151	1.80	703.27	1.17E+00	3.17E-03	79.9	3.39E+00
8	1	595.98	45	83	2.08	1192.58	7.86E-01	4.33E-03	47.5	1.48E+00
9	1	609.24*	42	69	1.86	1219.09	7.73E-01	4.07E-03	46.3	1.86E+00
10	1	1333.64	42	28	1.06	2667.58	4.20E-01	4.08E-03	28.4	3.42E+01
11	1	1460.46*	16	17	2.15	2921.12	3.92E-01	1.56E-03	78.9	1.11E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	16	10.67*	3.921E-01	2.890E+01	2.890E+01	157.71
TH-228	238.63	12	44.60*	1.520E+00	1.331E+00	1.342E+00	383.60
	240.98	------	3.95	1.511E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28777-11

Acquisition date : 1-JUN-2006 17:27:53

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.890E+01	2.890E+01	4.559E+01	157.71	
TH-228	1.91Y	1.01	1.331E+00	1.342E+00	5.149E+00	383.60	
			---------	---------			
	Total Activity :		3.024E+01	3.025E+01			
	Grand Total Activity :		3.024E+01	3.025E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28777-11

Acquisition date : 1-JUN-2006 17:27:53

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	84.27	6	223	1.38	169.10	166	7	6.08E-04	****	1.19E+00	
1	92.93	36	281	1.89	186.44	182	10	3.44E-03	****	1.40E+00	
1	139.89	55	257	1.34	280.38	276	9	5.30E-03	****	1.82E+00	
1	198.25	127	189	3.41	397.10	394	9	1.23E-02	42.7	1.68E+00	
1	294.90	41	135	1.74	590.42	587	9	3.96E-03	****	1.32E+00	
1	351.33	33	151	1.80	703.27	698	12	3.17E-03	****	1.17E+00	
1	595.98	45	83	2.08	1192.58	1187	16	4.33E-03	95.0	7.86E-01	
1	609.24	42	69	1.86	1219.09	1211	14	4.07E-03	92.6	7.73E-01	
1	1333.64	42	28	1.06	2667.58	2658	14	4.08E-03	56.9	4.20E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.890E+01	2.890E+01	4.559E+01	157.71	
TH-228	1.91Y	1.01	1.331E+00	1.342E+00	5.149E+00	383.60	
	Total Activity :		3.024E+01	3.025E+01			

Grand Total Activity : 3.024E+01 3.025E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.890E+01	4.559E+01	5.225E+01	0.000E+00	0.553
TH-228	1.342E+00	5.149E+00	8.198E+00	0.000E+00	0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	1.811E+01	2.688E+01	4.583E+01	0.000E+00	0.395
NA-24	-5.837E-02	1.413E-02	Half-Life too short		
CR-51	-7.058E-02	3.121E+01	5.075E+01	0.000E+00	-0.001
MN-54	-2.513E+00	2.916E+00	4.459E+00	0.000E+00	-0.564
CO-57	-1.485E+00	2.689E+00	4.372E+00	0.000E+00	-0.340
CO-58	-5.106E-01	3.266E+00	5.348E+00	0.000E+00	-0.095
FE-59	2.656E+00	6.134E+00	1.057E+01	0.000E+00	0.251
CO-60	2.694E+00	3.773E+00	6.835E+00	0.000E+00	0.394
ZN-65	7.670E+00	6.668E+00	1.213E+01	0.000E+00	0.632
SE-75	-1.604E+00	3.989E+00	6.449E+00	0.000E+00	-0.249
SR-85	1.403E+01	3.891E+00	7.383E+00	0.000E+00	1.900
Y-88	1.845E+00	3.523E+00	6.199E+00	0.000E+00	0.298
NB-94	-1.321E+00	2.987E+00	4.718E+00	0.000E+00	-0.280
NB-95	1.904E+00	3.201E+00	5.444E+00	0.000E+00	0.350
ZR-95	3.212E+00	5.693E+00	9.670E+00	0.000E+00	0.332
MO-99	-4.882E+01	1.899E+02	3.028E+02	0.000E+00	-0.161
RU-103	-9.433E-02	3.435E+00	5.587E+00	0.000E+00	-0.017
RU-106	2.378E+01	2.963E+01	5.148E+01	0.000E+00	0.462
AG-110m	-8.838E-01	3.212E+00	5.175E+00	0.000E+00	-0.171
SN-113	1.848E+00	3.959E+00	6.731E+00	0.000E+00	0.275
SB-124	-1.634E+00	7.703E+00	5.417E+00	0.000E+00	-0.302
SB-125	-2.829E-01	8.333E+00	1.370E+01	0.000E+00	-0.021
TE-129M	-2.732E+01	3.896E+01	6.100E+01	0.000E+00	-0.448
I-131	2.417E+00	5.794E+00	9.869E+00	0.000E+00	0.245
BA-133	-5.416E-01	4.603E+00	6.486E+00	0.000E+00	-0.083
CS-134	1.216E+00	7.180E+00	5.549E+00	0.000E+00	0.219
CS-136	-4.085E-01	4.440E+00	7.300E+00	0.000E+00	-0.056
CS-137	1.917E+00	3.318E+00	5.673E+00	0.000E+00	0.338
CE-139	-2.723E+00	3.014E+00	4.750E+00	0.000E+00	-0.573
BA-140	2.367E+00	1.673E+01	2.736E+01	0.000E+00	0.086
LA-140	-2.129E+00	5.223E+00	8.081E+00	0.000E+00	-0.263
CE-141	-3.029E-01	6.423E+00	9.039E+00	0.000E+00	-0.034
CE-144	-8.328E+00	2.431E+01	3.385E+01	0.000E+00	-0.246
EU-152	-9.868E+00	1.207E+01	1.556E+01	0.000E+00	-0.634
EU-154	-3.875E+00	5.633E+00	9.109E+00	0.000E+00	-0.425
RA-226	-4.597E+00	7.351E+01	1.207E+02	0.000E+00	-0.038
AC-228	-4.745E-01	1.219E+01	2.084E+01	0.000E+00	-0.023
TH-232	-4.732E-01	1.216E+01	2.078E+01	0.000E+00	-0.023
U-235	-1.062E+00	2.462E+01	3.468E+01	0.000E+00	-0.031
U-238	2.828E+02	3.234E+02	5.708E+02	0.000E+00	0.495
AM-241	-2.046E+01	2.572E+01	4.093E+01	0.000E+00	-0.500

```
A,04L28777-11      ,06/01/2006 20:20,05/24/2006 13:20,   3.483E+00,WG L28777-11 D
B,04L28777-11      ,LIBD                ,03/14/2005 09:04,0435L090804
C,K-40     ,YES,    2.890E+01,   4.559E+01,   5.225E+01,,     0.553
C,TH-228   ,YES,    1.342E+00,   5.149E+00,   8.198E+00,,     0.164
C,BE-7     ,NO ,    1.811E+01,   2.688E+01,   4.583E+01,,     0.395
C,CR-51    ,NO ,   -7.058E-02,   3.121E+01,   5.075E+01,,    -0.001
C,MN-54    ,NO ,   -2.513E+00,   2.916E+00,   4.459E+00,,    -0.564
C,CO-57    ,NO ,   -1.485E+00,   2.689E+00,   4.372E+00,,    -0.340
C,CO-58    ,NO ,   -5.106E-01,   3.266E+00,   5.348E+00,,    -0.095
C,FE-59    ,NO ,    2.656E+00,   6.134E+00,   1.057E+01,,     0.251
C,CO-60    ,NO ,    2.694E+00,   3.773E+00,   6.835E+00,,     0.394
C,ZN-65    ,NO ,    7.670E+00,   6.668E+00,   1.213E+01,,     0.632
C,SE-75    ,NO ,   -1.604E+00,   3.989E+00,   6.449E+00,,    -0.249
C,SR-85    ,NO ,    1.403E+01,   3.891E+00,   7.383E+00,,     1.900
C,Y-88     ,NO ,    1.845E+00,   3.523E+00,   6.199E+00,,     0.298
C,NB-94    ,NO ,   -1.321E+00,   2.987E+00,   4.718E+00,,    -0.280
C,NB-95    ,NO ,    1.904E+00,   3.201E+00,   5.444E+00,,     0.350
C,ZR-95    ,NO ,    3.212E+00,   5.693E+00,   9.670E+00,,     0.332
C,MO-99    ,NO ,   -4.882E+01,   1.899E+02,   3.028E+02,,    -0.161
C,RU-103   ,NO ,   -9.433E-02,   3.435E+00,   5.587E+00,,    -0.017
C,RU-106   ,NO ,    2.378E+01,   2.963E+01,   5.148E+01,,     0.462
C,AG-110m  ,NO ,   -8.838E-01,   3.212E+00,   5.175E+00,,    -0.171
C,SN-113   ,NO ,    1.848E+00,   3.959E+00,   6.731E+00,,     0.275
C,SB-124   ,NO ,   -1.634E+00,   7.703E+00,   5.417E+00,,    -0.302
C,SB-125   ,NO ,   -2.829E-01,   8.333E+00,   1.370E+01,,    -0.021
C,TE-129M  ,NO ,   -2.732E+01,   3.896E+01,   6.100E+01,,    -0.448
C,I-131    ,NO ,    2.417E+00,   5.794E+00,   9.869E+00,,     0.245
C,BA-133   ,NO ,   -5.416E-01,   4.603E+00,   6.486E+00,,    -0.083
C,CS-134   ,NO ,    1.216E+00,   7.180E+00,   5.549E+00,,     0.219
C,CS-136   ,NO ,   -4.085E-01,   4.440E+00,   7.300E+00,,    -0.056
C,CS-137   ,NO ,    1.917E+00,   3.318E+00,   5.673E+00,,     0.338
C,CE-139   ,NO ,   -2.723E+00,   3.014E+00,   4.750E+00,,    -0.573
C,BA-140   ,NO ,    2.367E+00,   1.673E+01,   2.736E+01,,     0.086
C,LA-140   ,NO ,   -2.129E+00,   5.223E+00,   8.081E+00,,    -0.263
C,CE-141   ,NO ,   -3.029E-01,   6.423E+00,   9.039E+00,,    -0.034
C,CE-144   ,NO ,   -8.328E+00,   2.431E+01,   3.385E+01,,    -0.246
C,EU-152   ,NO ,   -9.868E+00,   1.207E+01,   1.556E+01,,    -0.634
C,EU-154   ,NO ,   -3.875E+00,   5.633E+00,   9.109E+00,,    -0.425
C,RA-226   ,NO ,   -4.597E+00,   7.351E+01,   1.207E+02,,    -0.038
C,AC-228   ,NO ,   -4.745E-01,   1.219E+01,   2.084E+01,,    -0.023
C,TH-232   ,NO ,   -4.732E-01,   1.216E+01,   2.078E+01,,    -0.023
C,U-235    ,NO ,   -1.062E+00,   2.462E+01,   3.468E+01,,    -0.031
C,U-238    ,NO ,    2.828E+02,   3.234E+02,   5.708E+02,,     0.495
C,AM-241   ,NO ,   -2.046E+01,   2.572E+01,   4.093E+01,,    -0.500
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 1-JUN-2006 20:35:30.80
TBE23 03017322 HpGe ********** Aquisition Date/Time: 1-JUN-2006 17:27:57.03

LIMS No., Customer Name, Client ID: WG L28777-12 DRESDEN

Sample ID : 23L28777-12
Sample Type : WG
Quantity : 3.46670E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 06:40:00.
Geometry : 2335L090704
BKGFILE : 23BG050506MT
Real Time : 0 03:07:19.49
Live time : 0 03:07:11.73

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	33.96*	26	137	1.89	68.24	9.64E-02	2.28E-03	92.0	
2	2	40.90*	11	342	1.47	82.11	2.35E-01	9.68E-04	317.6	5.12E-01
3	2	43.61	25	248	1.11	87.53	3.05E-01	2.19E-03	111.2	
4	0	139.22*	63	475	1.43	278.61	2.05E+00	5.61E-03	62.1	
5	0	185.34*	28	341	1.61	370.78	1.95E+00	2.49E-03	124.3	
6	0	238.42*	40	393	1.64	476.88	1.73E+00	3.52E-03	100.8	
7	0	295.00*	7	241	1.16	589.96	1.50E+00	6.44E-04	392.0	
8	0	351.99*	233	150	1.33	703.89	1.32E+00	2.08E-02	13.2	
9	0	510.89*	10	161	2.45	1021.52	9.85E-01	9.32E-04	338.1	
10	0	595.94	49	72	0.93	1191.57	8.74E-01	4.34E-03	34.5	
11	0	609.31*	166	96	1.59	1218.29	8.59E-01	1.48E-02	15.5	
12	0	1119.95*	35	17	1.31	2239.43	5.53E-01	3.14E-03	30.6	
13	0	1461.62*	48	29	1.60	2922.88	4.59E-01	4.24E-03	37.9	
14	0	1765.28*	49	28	1.68	3530.47	4.00E-01	4.35E-03	29.9	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	48	10.67*	4.593E-01	6.745E+01	6.745E+01	75.85
RA-226	186.21	28	3.28*	1.949E+00	3.042E+01	3.042E+01	248.64
TH-228	238.63	40	44.60*	1.725E+00	3.571E+00	3.598E+00	201.57
	240.98	------	3.95	1.714E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28777-12

Acquisition date : 1-JUN-2006 17:27:57

Total number of lines in spectrum	14	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	3	21.43%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.745E+01	6.745E+01	5.116E+01	75.85	
RA-226	1600.00Y	1.00	3.042E+01	3.042E+01	7.564E+01	248.64	
TH-228	1.91Y	1.01	3.571E+00	3.598E+00	7.253E+00	201.57	
			---------	---------			
	Total Activity :		1.014E+02	1.015E+02			

Grand Total Activity : 1.014E+02 1.015E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28777-12

Acquisition date : 1-JUN-2006 17:27:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	33.96	26	137	1.89	68.24	65	8	2.28E-03	****	9.64E-02	
2	40.90	11	342	1.47	82.11	75	16	9.68E-04	****	2.35E-01	
2	43.61	25	248	1.11	87.53	75	16	2.19E-03	****	3.05E-01	
0	139.22	63	475	1.43	278.61	275	8	5.61E-03	****	2.05E+00	
0	295.00	7	241	1.16	589.96	586	8	6.44E-04	****	1.50E+00	
0	351.99	233	150	1.33	703.89	699	13	2.08E-02	26.4	1.32E+00	
0	510.89	10	161	2.45	1021.52	1012	19	9.32E-04	****	9.85E-01	
0	595.94	49	72	0.93	1191.57	1187	9	4.34E-03	69.0	8.74E-01	
0	609.31	166	96	1.59	1218.29	1210	14	1.48E-02	31.0	8.59E-01	
0	1119.95	35	17	1.31	2239.43	2234	11	3.14E-03	61.3	5.53E-01	
0	1765.28	49	28	1.68	3530.47	3522	16	4.35E-03	59.7	4.00E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	3	21.43%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.745E+01	6.745E+01	5.116E+01	75.85	
RA-226	1600.00Y	1.00	3.042E+01	3.042E+01	7.564E+01	248.64	
TH-228	1.91Y	1.01	3.571E+00	3.598E+00	7.253E+00	201.57	
			---------	---------			
	Total Activity :		1.014E+02	1.015E+02			

Grand Total Activity : 1.014E+02 1.015E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.745E+01	5.116E+01	4.604E+01	0.000E+00	1.465
RA-226	3.042E+01	7.564E+01	1.471E+02	0.000E+00	0.207
TH-228	3.598E+00	7.253E+00	1.016E+01	0.000E+00	0.354

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-5.468E+00		2.999E+01	5.046E+01	0.000E+00	-0.108
NA-24	-2.528E+03		1.306E+04	2.263E+04	0.000E+00	-0.112
CR-51	2.534E+00		3.343E+01	5.716E+01	0.000E+00	0.044
MN-54	1.597E-01		3.246E+00	5.617E+00	0.000E+00	0.028
CO-57	-2.032E+00		3.764E+00	6.252E+00	0.000E+00	-0.325
CO-58	-3.570E-01		3.293E+00	5.659E+00	0.000E+00	-0.063
FE-59	7.477E-01		6.415E+00	1.139E+01	0.000E+00	0.066
CO-60	-1.009E+00		3.090E+00	5.299E+00	0.000E+00	-0.190
ZN-65	6.460E+00		7.378E+00	1.201E+01	0.000E+00	0.538
SE-75	-2.292E+00		4.766E+00	8.029E+00	0.000E+00	-0.285
SR-85	1.835E+01		4.084E+00	7.380E+00	0.000E+00	2.486
Y-88	-1.633E+00		3.337E+00	5.699E+00	0.000E+00	-0.287
NB-94	1.427E+00		3.099E+00	5.493E+00	0.000E+00	0.260
NB-95	7.277E-01		3.310E+00	5.802E+00	0.000E+00	0.125
ZR-95	-1.470E+00		5.783E+00	9.867E+00	0.000E+00	-0.149
MO-99	1.236E+01		1.532E+02	2.669E+02	0.000E+00	0.046
RU-103	1.851E+00		3.680E+00	6.308E+00	0.000E+00	0.293
RU-106	3.167E+01		2.969E+01	5.439E+01	0.000E+00	0.582
AG-110m	5.374E-01		3.039E+00	5.335E+00	0.000E+00	0.101
SN-113	2.806E+00		4.302E+00	7.521E+00	0.000E+00	0.373
SB-124	2.572E+00		6.791E+00	5.540E+00	0.000E+00	0.464
SB-125	-4.012E-01		8.977E+00	1.526E+01	0.000E+00	-0.026
TE-129M	-2.388E+01		4.190E+01	6.930E+01	0.000E+00	-0.345
I-131	2.379E+00		6.316E+00	1.077E+01	0.000E+00	0.221
BA-133	7.658E+00		5.466E+00	8.466E+00	0.000E+00	0.905
CS-134	1.003E+01		5.682E+00	6.933E+00	0.000E+00	1.446
CS-136	7.147E-01		4.447E+00	7.781E+00	0.000E+00	0.092
CS-137	-2.142E+00		3.396E+00	5.686E+00	0.000E+00	-0.377
CE-139	-1.602E+00		3.755E+00	6.212E+00	0.000E+00	-0.258
BA-140	3.949E+00		1.690E+01	2.902E+01	0.000E+00	0.136
LA-140	4.716E+00		5.197E+00	1.002E+01	0.000E+00	0.471
CE-141	2.909E+00		8.622E+00	1.239E+01	0.000E+00	0.235
CE-144	-4.697E+01		3.475E+01	4.730E+01	0.000E+00	-0.993
EU-152	2.429E+00		1.131E+01	1.656E+01	0.000E+00	0.147
EU-154	1.179E+00		7.774E+00	1.311E+01	0.000E+00	0.090
AC-228	-1.067E+00		1.196E+01	2.093E+01	0.000E+00	-0.051
TH-232	-1.064E+00		1.193E+01	2.088E+01	0.000E+00	-0.051
U-235	4.615E+00		3.439E+01	4.917E+01	0.000E+00	0.094
U-238	-1.104E+02		3.214E+02	5.528E+02	0.000E+00	-0.200
AM-241	-1.529E+00		2.042E+01	3.364E+01	0.000E+00	-0.045

```
A,23L28777-12      ,06/01/2006 20:35,05/25/2006 06:40,   3.467E+00,WG L28777-12 D
B,23L28777-12      ,LIBD                ,06/01/2006 10:14,2335L090704
C,K-40     ,YES,    6.745E+01,    5.116E+01,    4.604E+01,,     1.465
C,RA-226   ,YES,    3.042E+01,    7.564E+01,    1.471E+02,,     0.207
C,TH-228   ,YES,    3.598E+00,    7.253E+00,    1.016E+01,,     0.354
C,BE-7     ,NO ,   -5.468E+00,    2.999E+01,    5.046E+01,,    -0.108
C,NA-24    ,NO ,   -2.528E+03,    1.306E+04,    2.263E+04,,    -0.112
C,CR-51    ,NO ,    2.534E+00,    3.343E+01,    5.716E+01,,     0.044
C,MN-54    ,NO ,    1.597E-01,    3.246E+00,    5.617E+00,,     0.028
C,CO-57    ,NO ,   -2.032E+00,    3.764E+00,    6.252E+00,,    -0.325
C,CO-58    ,NO ,   -3.570E-01,    3.293E+00,    5.659E+00,,    -0.063
C,FE-59    ,NO ,    7.477E-01,    6.415E+00,    1.139E+01,,     0.066
C,CO-60    ,NO ,   -1.009E+00,    3.090E+00,    5.299E+00,,    -0.190
C,ZN-65    ,NO ,    6.460E+00,    7.378E+00,    1.201E+01,,     0.538
C,SE-75    ,NO ,   -2.292E+00,    4.766E+00,    8.029E+00,,    -0.285
C,SR-85    ,NO ,    1.835E+01,    4.084E+00,    7.380E+00,,     2.486
C,Y-88     ,NO ,   -1.633E+00,    3.337E+00,    5.699E+00,,    -0.287
C,NB-94    ,NO ,    1.427E+00,    3.099E+00,    5.493E+00,,     0.260
C,NB-95    ,NO ,    7.277E-01,    3.310E+00,    5.802E+00,,     0.125
C,ZR-95    ,NO ,   -1.470E+00,    5.783E+00,    9.867E+00,,    -0.149
C,MO-99    ,NO ,    1.236E+01,    1.532E+02,    2.669E+02,,     0.046
C,RU-103   ,NO ,    1.851E+00,    3.680E+00,    6.308E+00,,     0.293
C,RU-106   ,NO ,    3.167E+01,    2.969E+01,    5.439E+01,,     0.582
C,AG-110m  ,NO ,    5.374E-01,    3.039E+00,    5.335E+00,,     0.101
C,SN-113   ,NO ,    2.806E+00,    4.302E+00,    7.521E+00,,     0.373
C,SB-124   ,NO ,    2.572E+00,    6.791E+00,    5.540E+00,,     0.464
C,SB-125   ,NO ,   -4.012E-01,    8.977E+00,    1.526E+01,,    -0.026
C,TE-129M  ,NO ,   -2.388E+01,    4.190E+01,    6.930E+01,,    -0.345
C,I-131    ,NO ,    2.379E+00,    6.316E+00,    1.077E+01,,     0.221
C,BA-133   ,NO ,    7.658E+00,    5.466E+00,    8.466E+00,,     0.905
C,CS-134   ,NO ,    1.003E+01,    5.682E+00,    6.933E+00,,     1.446
C,CS-136   ,NO ,    7.147E-01,    4.447E+00,    7.781E+00,,     0.092
C,CS-137   ,NO ,   -2.142E+00,    3.396E+00,    5.686E+00,,    -0.377
C,CE-139   ,NO ,   -1.602E+00,    3.755E+00,    6.212E+00,,    -0.258
C,BA-140   ,NO ,    3.949E+00,    1.690E+01,    2.902E+01,,     0.136
C,LA-140   ,NO ,    4.716E+00,    5.197E+00,    1.002E+01,,     0.471
C,CE-141   ,NO ,    2.909E+00,    8.622E+00,    1.239E+01,,     0.235
C,CE-144   ,NO ,   -4.697E+01,    3.475E+01,    4.730E+01,,    -0.993
C,EU-152   ,NO ,    2.429E+00,    1.131E+01,    1.656E+01,,     0.147
C,EU-154   ,NO ,    1.179E+00,    7.774E+00,    1.311E+01,,     0.090
C,AC-228   ,NO ,   -1.067E+00,    1.196E+01,    2.093E+01,,    -0.051
C,TH-232   ,NO ,   -1.064E+00,    1.193E+01,    2.088E+01,,    -0.051
C,U-235    ,NO ,    4.615E+00,    3.439E+01,    4.917E+01,,     0.094
C,U-238    ,NO ,   -1.104E+02,    3.214E+02,    5.528E+02,,    -0.200
C,AM-241   ,NO ,   -1.529E+00,    2.042E+01,    3.364E+01,,    -0.045
```

Sec. Review: KO Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 2-JUN-2006 03:59:16.13
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 1-JUN-2006 17:58:57.88

LIMS No., Customer Name, Client ID: WG L28777-13 DRESDEN

Sample ID : 11L28777-13
Sample Type : WG
Quantity : 3.66220E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 09:40:00.
Geometry : 1135L090204
BKGFILE : 11BG050506MT
Real Time : 0 10:00:12.69
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.26	307	2391	1.24	131.99	6.01E-01	8.53E-03	29.3	
2	0	92.18*	35	1041	1.27	184.09	1.27E+00	9.69E-04	180.6	
3	0	139.60	246	1004	1.29	279.36	1.69E+00	6.84E-03	24.1	
4	0	198.14*	199	768	1.37	396.94	1.57E+00	5.54E-03	27.5	
5	0	238.88*	11	1078	1.11	478.75	1.42E+00	3.02E-04	656.0	
6	0	294.87*	101	650	1.33	591.16	1.23E+00	2.81E-03	53.6	
7	0	351.58*	132	328	1.04	704.98	1.08E+00	3.67E-03	29.3	
8	0	432.86	35	365	0.91	868.06	9.18E-01	9.81E-04	113.0	
9	0	583.22*	120	343	1.76	1169.56	7.27E-01	3.34E-03	40.2	
10	0	595.97	118	266	1.51	1195.12	7.14E-01	3.28E-03	30.0	
11	0	608.88*	242	205	1.80	1220.99	7.03E-01	6.72E-03	15.3	
12	0	910.55*	0	180	1.77	1825.10	5.14E-01	8.54E-06	*****	
13	0	1007.82	36	80	1.50	2019.69	4.75E-01	1.00E-03	49.4	
14	0	1120.25*	94	95	2.16	2244.48	4.37E-01	2.60E-03	28.9	
15	0	1461.02	304	49	2.41	2925.06	3.54E-01	8.45E-03	7.9	
16	0	1761.61*	38	64	1.73	3524.39	3.04E-01	1.07E-03	54.4	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	304	10.67*	3.539E-01	1.651E+02	1.651E+02	15.81
AC-228	835.50	------	1.75	5.493E-01	------	Line Not Found	------
	911.07	0	27.70*	5.138E-01	4.426E-02	4.437E-02	21771.96
TH-228	238.63	11	44.60*	1.420E+00	3.514E-01	3.540E-01	1311.93
	240.98	------	3.95	1.413E+00	------	Line Not Found	------
TH-232	583.14	120	30.25	7.266E-01	1.123E+01	1.123E+01	80.44
	911.07	0	27.70*	5.138E-01	4.426E-02	4.426E-02	21771.96
	969.11	------	16.60	4.895E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28777-13

Acquisition date : 1-JUN-2006 17:58:57

Total number of lines in spectrum	16	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	4	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.651E+02	1.651E+02	0.261E+02	15.81	
AC-228	5.75Y	1.00	4.426E-02	4.437E-02	966.1E-02	21771.96	
TH-228	1.91Y	1.01	3.514E-01	3.540E-01	46.45E-01	1311.93	
TH-232	1.41E+10Y	1.00	4.426E-02	4.426E-02	963.7E-02	21771.96	
	Total Activity :		1.656E+02	1.656E+02			
	Grand Total Activity :		1.656E+02	1.656E+02			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28777-13

Acquisition date : 1-JUN-2006 17:58:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.26	307	2391	1.24	131.99	128	9	8.53E-03	58.6	6.01E-01	
0	92.18	35	1041	1.27	184.09	180	9	9.69E-04	****	1.27E+00	
0	139.60	246	1004	1.29	279.36	275	9	6.84E-03	48.1	1.69E+00	
0	198.14	199	768	1.37	396.94	393	9	5.54E-03	54.9	1.57E+00	
0	294.87	101	650	1.33	591.16	586	12	2.81E-03	****	1.23E+00	
0	351.58	132	328	1.04	704.98	701	8	3.67E-03	58.7	1.08E+00	
0	432.86	35	365	0.91	868.06	861	13	9.81E-04	****	9.18E-01	
0	595.97	118	266	1.51	1195.12	1189	13	3.28E-03	59.9	7.14E-01	
0	608.88	242	205	1.80	1220.99	1215	13	6.72E-03	30.6	7.03E-01	
0	1007.82	36	80	1.50	2019.69	2017	10	1.00E-03	98.8	4.75E-01	
0	1120.25	94	95	2.16	2244.48	2236	18	2.60E-03	57.8	4.37E-01	
0	1761.61	38	64	1.73	3524.39	3516	16	1.07E-03	****	3.04E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	16	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	4	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.651E+02	1.651E+02	0.261E+02	15.81	
TH-228	1.91Y	1.01	3.514E-01	3.540E-01	46.45E-01	1311.93	
TH-232	1.41E+10Y	1.00	5.998E+00	5.998E+00	6.591E+00	109.88	
	Total Activity :		1.715E+02	1.715E+02			

Grand Total Activity : 1.715E+02 1.715E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.651E+02	2.611E+01	3.008E+01	0.000E+00	5.489
TH-228	3.540E-01	4.645E+00	5.222E+00	0.000E+00	0.068

TH-232	5.998E+00	6.591E+00	1.071E+01	0.000E+00	0.560

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.156E+00		1.680E+01	2.802E+01	0.000E+00	0.041
NA-24	-4.700E+03		8.791E+03	1.387E+04	0.000E+00	-0.339
CR-51	-2.007E+01		1.812E+01	2.924E+01	0.000E+00	-0.687
MN-54	1.128E+00		1.870E+00	3.155E+00	0.000E+00	0.358
CO-57	-3.206E-01		1.843E+00	2.981E+00	0.000E+00	-0.108
CO-58	-7.094E-01		1.953E+00	3.178E+00	0.000E+00	-0.223
FE-59	3.373E+00		3.996E+00	6.853E+00	0.000E+00	0.492
CO-60	1.076E-01		1.959E+00	3.205E+00	0.000E+00	0.034
ZN-65	5.726E+00		4.826E+00	7.230E+00	0.000E+00	0.792
SE-75	-3.768E-01		2.522E+00	4.081E+00	0.000E+00	-0.092
SR-85	1.626E+01		2.241E+00	4.316E+00	0.000E+00	3.769
Y-88	-1.531E+00		2.408E+00	3.831E+00	0.000E+00	-0.400
NB-94	-8.750E-01		1.728E+00	2.754E+00	0.000E+00	-0.318
NB-95	1.911E+00		1.969E+00	3.379E+00	0.000E+00	0.566
ZR-95	1.214E-01		3.510E+00	5.829E+00	0.000E+00	0.021
MO-99	1.734E+00		8.859E+01	1.472E+02	0.000E+00	0.012
RU-103	7.250E-01		2.086E+00	3.501E+00	0.000E+00	0.207
RU-106	-9.000E+00		1.753E+01	2.781E+01	0.000E+00	-0.324
AG-110m	-5.781E-01		1.824E+00	2.944E+00	0.000E+00	-0.196
SN-113	1.007E+00		2.503E+00	4.148E+00	0.000E+00	0.243
SB-124	3.020E+00		4.067E+00	3.165E+00	0.000E+00	0.954
SB-125	-4.318E+00		6.344E+00	8.461E+00	0.000E+00	-0.510
TE-129M	5.928E+00		2.419E+01	3.961E+01	0.000E+00	0.150
I-131	2.585E+00		3.505E+00	5.878E+00	0.000E+00	0.440
BA-133	2.325E+00		2.981E+00	4.275E+00	0.000E+00	0.544
CS-134	1.014E+01		3.892E+00	3.659E+00	0.000E+00	2.772
CS-136	-1.377E+00		2.613E+00	4.217E+00	0.000E+00	-0.326
CS-137	-6.335E-01		2.014E+00	3.250E+00	0.000E+00	-0.195
CE-139	1.044E-01		1.798E+00	2.983E+00	0.000E+00	0.035
BA-140	8.990E+00		9.400E+00	1.603E+01	0.000E+00	0.561
LA-140	2.085E+00		3.072E+00	5.258E+00	0.000E+00	0.396
CE-141	2.986E+00		3.906E+00	5.649E+00	0.000E+00	0.529
CE-144	-1.855E+01		1.674E+01	2.231E+01	0.000E+00	-0.831
EU-152	-4.955E+00		6.838E+00	9.293E+00	0.000E+00	-0.533
EU-154	-1.234E+00		3.852E+00	6.213E+00	0.000E+00	-0.199
RA-226	3.220E+01		4.615E+01	7.471E+01	0.000E+00	0.431
AC-228	4.437E-02		9.661E+00	1.270E+01	0.000E+00	0.003
U-235	1.927E+01		1.543E+01	2.259E+01	0.000E+00	0.853
U-238	-9.553E+01		2.549E+02	3.310E+02	0.000E+00	-0.289
AM-241	-1.621E+01		2.480E+01	3.611E+01	0.000E+00	-0.449

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A,11L28777-13      ,06/02/2006 03:59,05/25/2006 09:40,   3.662E+00,WG L28777-13 D
B,11L28777-13      ,LIBD                ,06/01/2006 08:23,1135L090204
C,K-40     ,YES,    1.651E+02,   2.611E+01,   3.008E+01,,     5.489
C,TH-228   ,YES,    3.540E-01,   4.645E+00,   5.222E+00,,     0.068
C,TH-232   ,YES,    5.998E+00,   6.591E+00,   1.071E+01,,     0.560
C,BE-7     ,NO ,    1.156E+00,   1.680E+01,   2.802E+01,,     0.041
C,NA-24    ,NO ,   -4.700E+03,   8.791E+03,   1.387E+04,,    -0.339
C,CR-51    ,NO ,   -2.007E+01,   1.812E+01,   2.924E+01,,    -0.687
C,MN-54    ,NO ,    1.128E+00,   1.870E+00,   3.155E+00,,     0.358
C,CO-57    ,NO ,   -3.206E-01,   1.843E+00,   2.981E+00,,    -0.108
C,CO-58    ,NO ,   -7.094E-01,   1.953E+00,   3.178E+00,,    -0.223
C,FE-59    ,NO ,    3.373E+00,   3.996E+00,   6.853E+00,,     0.492
C,CO-60    ,NO ,    1.076E-01,   1.959E+00,   3.205E+00,,     0.034
C,ZN-65    ,NO ,    5.726E+00,   4.826E+00,   7.230E+00,,     0.792
C,SE-75    ,NO ,   -3.768E-01,   2.522E+00,   4.081E+00,,    -0.092
C,SR-85    ,NO ,    1.626E+01,   2.241E+00,   4.316E+00,,     3.769
C,Y-88     ,NO ,   -1.531E+00,   2.408E+00,   3.831E+00,,    -0.400
C,NB-94    ,NO ,   -8.750E-01,   1.728E+00,   2.754E+00,,    -0.318
C,NB-95    ,NO ,    1.911E+00,   1.969E+00,   3.379E+00,,     0.566
C,ZR-95    ,NO ,    1.214E-01,   3.510E+00,   5.829E+00,,     0.021
C,MO-99    ,NO ,    1.734E+00,   8.859E+01,   1.472E+02,,     0.012
C,RU-103   ,NO ,    7.250E-01,   2.086E+00,   3.501E+00,,     0.207
C,RU-106   ,NO ,   -9.000E+00,   1.753E+01,   2.781E+01,,    -0.324
C,AG-110m  ,NO ,   -5.781E-01,   1.824E+00,   2.944E+00,,    -0.196
C,SN-113   ,NO ,    1.007E+00,   2.503E+00,   4.148E+00,,     0.243
C,SB-124   ,NO ,    3.020E+00,   4.067E+00,   3.165E+00,,     0.954
C,SB-125   ,NO ,   -4.318E+00,   6.344E+00,   8.461E+00,,    -0.510
C,TE-129M  ,NO ,    5.928E+00,   2.419E+01,   3.961E+01,,     0.150
C,I-131    ,NO ,    2.585E+00,   3.505E+00,   5.878E+00,,     0.440
C,BA-133   ,NO ,    2.325E+00,   2.981E+00,   4.275E+00,,     0.544
C,CS-134   ,NO ,    1.014E+01,   3.892E+00,   3.659E+00,,     2.772
C,CS-136   ,NO ,   -1.377E+00,   2.613E+00,   4.217E+00,,    -0.326
C,CS-137   ,NO ,   -6.335E-01,   2.014E+00,   3.250E+00,,    -0.195
C,CE-139   ,NO ,    1.044E-01,   1.798E+00,   2.983E+00,,     0.035
C,BA-140   ,NO ,    8.990E+00,   9.400E+00,   1.603E+01,,     0.561
C,LA-140   ,NO ,    2.085E+00,   3.072E+00,   5.258E+00,,     0.396
C,CE-141   ,NO ,    2.986E+00,   3.906E+00,   5.649E+00,,     0.529
C,CE-144   ,NO ,   -1.855E+01,   1.674E+01,   2.231E+01,,    -0.831
C,EU-152   ,NO ,   -4.955E+00,   6.838E+00,   9.293E+00,,    -0.533
C,EU-154   ,NO ,   -1.234E+00,   3.852E+00,   6.213E+00,,    -0.199
C,RA-226   ,NO ,    3.220E+01,   4.615E+01,   7.471E+01,,     0.431
C,AC-228   ,NO ,    4.437E-02,   9.661E+00,   1.270E+01,,     0.003
C,U-235    ,NO ,    1.927E+01,   1.543E+01,   2.259E+01,,     0.853
C,U-238    ,NO ,   -9.553E+01,   2.549E+02,   3.310E+02,,    -0.289
C,AM-241   ,NO ,   -1.621E+01,   2.480E+01,   3.611E+01,,    -0.449
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Sec. Review: Analyst: LIMS: ✓

(20)

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 2-JUN-2006 04:53:49.11
TBE10 12892256 HpGe ********** Aquisition Date/Time: 1-JUN-2006 18:53:36.50

LIMS No., Customer Name, Client ID: WG L28777-14 DRESDEN

Sample ID : 10L28777-14
Sample Type : WG
Quantity : 3.59360E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 11:09:00.
Geometry : 1035L091004
BKGFILE : 10BG050506MT
Real Time : 0 10:00:06.10
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.35*	256	1208	1.43	132.16	6.35E-01	7.12E-03	26.8	5.95E-01
2	1	92.78*	85	1364	1.69	185.04	1.30E+00	2.36E-03	87.3	1.50E+00
3	1	139.96	285	1100	1.44	279.43	1.68E+00	7.92E-03	21.8	8.42E-01
4	1	185.79*	59	799	1.36	371.14	1.59E+00	1.63E-03	92.1	1.24E+00
5	1	198.16*	236	971	1.61	395.88	1.55E+00	6.57E-03	28.1	1.05E+00
6	1	238.69*	45	610	1.15	476.98	1.40E+00	1.25E-03	110.2	5.17E-01
7	1	294.85*	43	520	1.55	589.35	1.21E+00	1.19E-03	105.4	4.24E+00
8	1	352.07*	189	460	1.43	703.85	1.07E+00	5.25E-03	26.0	1.19E+00
9	1	582.73*	198	222	1.18	1165.42	7.19E-01	5.49E-03	18.2	4.42E+01
10	1	595.94	76	228	1.61	1191.86	7.06E-01	2.11E-03	39.2	2.52E+00
11	1	609.58*	269	228	1.72	1219.17	6.94E-01	7.48E-03	14.6	1.75E+00
12	1	969.76*	19	106	3.86	1940.01	4.83E-01	5.28E-04	126.9	1.64E+00
13	1	1120.73*	76	78	1.97	2242.20	4.33E-01	2.11E-03	28.8	1.17E+00
14	1	1461.73*	43	99	2.23	2924.79	3.56E-01	1.19E-03	72.7	2.32E+00
15	1	1765.14*	44	43	2.73	3532.23	3.13E-01	1.23E-03	44.9	1.73E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	43	10.67*	3.557E-01	2.352E+01	2.352E+01	145.37
RA-226	186.21	59	3.28*	1.594E+00	2.339E+01	2.339E+01	184.30
TH-228	238.63	45	44.60*	1.400E+00	1.501E+00	1.512E+00	220.36
	240.98	------	3.95	1.392E+00	------ Line Not Found		------
TH-232	583.14	198	30.25	7.187E-01	1.899E+01	1.899E+01	36.31
	911.07	------	27.70*	5.070E-01	------ Line Not Found		------
	969.11	19	16.60	4.831E-01	4.956E+00	4.956E+00	253.86
U-235	143.76	------	10.50*	1.683E+00	------ Line Not Found		------
	163.35	------	4.70	1.659E+00	------ Line Not Found		------
	185.71	59	54.00	1.594E+00	1.421E+00	1.421E+00	184.30
	205.31	------	4.70	1.524E+00	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28777-14

Acquisition date : 1-JUN-2006 18:53:36

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.352E+01	2.352E+01	3.420E+01	145.37	
RA-226	1600.00Y	1.00	2.339E+01	2.339E+01	4.311E+01	184.30	
TH-228	1.91Y	1.01	1.501E+00	1.512E+00	3.332E+00	220.36	
TH-232	1.41E+10Y	1.00	1.899E+01	1.899E+01	0.690E+01	36.31	K
U-235	7.04E+08Y	1.00	1.421E+00	1.421E+00	2.619E+00	184.30	K
			---------	---------			
	Total Activity :		6.883E+01	6.884E+01			

Grand Total Activity : 6.883E+01 6.884E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28777-14

Acquisition date : 1-JUN-2006 18:53:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.35	256	1208	1.43	132.16	128	9	7.12E-03	53.7	6.35E-01	
1	92.78	85	1364	1.69	185.04	181	10	2.36E-03	****	1.30E+00	
1	139.96	285	1100	1.44	279.43	275	9	7.92E-03	43.5	1.68E+00	
1	198.16	236	971	1.61	395.88	392	11	6.57E-03	56.2	1.55E+00	
1	294.85	43	520	1.55	589.35	586	9	1.19E-03	****	1.21E+00	
1	352.07	189	460	1.43	703.85	699	11	5.25E-03	52.1	1.07E+00	
1	595.94	76	228	1.61	1191.86	1188	10	2.11E-03	78.4	7.06E-01	
1	609.58	269	228	1.72	1219.17	1213	12	7.48E-03	29.2	6.94E-01	
1	1120.73	76	78	1.97	2242.20	2237	12	2.11E-03	57.7	4.33E-01	
1	1765.14	44	43	2.73	3532.23	3523	19	1.23E-03	89.8	3.13E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.352E+01	2.352E+01	3.420E+01	145.37	
RA-226	1600.00Y	1.00	2.339E+01	2.339E+01	4.311E+01	184.30	
TH-228	1.91Y	1.01	1.501E+00	1.512E+00	3.332E+00	220.36	
TH-232	1.41E+10Y	1.00	1.575E+01	1.575E+01	0.605E+01	38.40	
			---------	---------			
	Total Activity :		6.417E+01	6.418E+01			

Grand Total Activity : 6.417E+01 6.418E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.352E+01	3.420E+01	3.098E+01	0.000E+00	0.759
RA-226	2.339E+01	4.311E+01	8.147E+01	0.000E+00	0.287
TH-228	1.512E+00	3.332E+00	6.047E+00	0.000E+00	0.250
TH-232	1.575E+01	6.047E+00	1.198E+01	0.000E+00	1.315

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.756E+00		1.792E+01	2.926E+01	0.000E+00	0.060
NA-24	-1.483E+04		8.855E+03	1.302E+04	0.000E+00	-1.139
CR-51	-1.462E+01		2.009E+01	3.261E+01	0.000E+00	-0.448
MN-54	-5.980E-01		2.000E+00	3.222E+00	0.000E+00	-0.186
CO-57	-3.001E-01		2.124E+00	3.491E+00	0.000E+00	-0.086
CO-58	2.589E+00		2.033E+00	3.489E+00	0.000E+00	0.742
FE-59	-1.567E+00		3.953E+00	6.384E+00	0.000E+00	-0.245
CO-60	-6.553E-01		1.918E+00	3.063E+00	0.000E+00	-0.214
ZN-65	6.949E+00		5.238E+00	7.851E+00	0.000E+00	0.885
SE-75	-7.342E-01		2.782E+00	4.592E+00	0.000E+00	-0.160
SR-85	1.727E+01		2.332E+00	4.504E+00	0.000E+00	3.835
Y-88	-1.085E+00		2.111E+00	3.327E+00	0.000E+00	-0.326
NB-94	3.034E-01		1.924E+00	3.178E+00	0.000E+00	0.095
NB-95	-2.425E-01		2.028E+00	3.304E+00	0.000E+00	-0.073
ZR-95	2.240E+00		3.602E+00	6.042E+00	0.000E+00	0.371
MO-99	5.907E+01		9.724E+01	1.631E+02	0.000E+00	0.362
RU-103	1.815E+00		2.257E+00	3.758E+00	0.000E+00	0.483
RU-106	-2.771E+01		1.893E+01	2.837E+01	0.000E+00	-0.977
AG-110m	-3.635E-01		1.903E+00	3.113E+00	0.000E+00	-0.117
SN-113	1.089E+00		2.690E+00	4.456E+00	0.000E+00	0.244
SB-124	1.650E+00		4.698E+00	3.351E+00	0.000E+00	0.493
SB-125	-3.261E+00		5.701E+00	9.166E+00	0.000E+00	-0.356
TE-129M	1.748E+01		2.612E+01	4.340E+01	0.000E+00	0.403
I-131	6.275E-02		3.853E+00	6.252E+00	0.000E+00	0.010
BA-133	1.301E+01		3.406E+00	5.315E+00	0.000E+00	2.447
CS-134	1.037E+01		4.487E+00	3.947E+00	0.000E+00	2.626
CS-136	-1.852E+00		2.827E+00	4.489E+00	0.000E+00	-0.412
CS-137	-1.125E+00		2.087E+00	3.369E+00	0.000E+00	-0.334
CE-139	-1.362E+00		2.147E+00	3.477E+00	0.000E+00	-0.392
BA-140	8.927E+00		1.014E+01	1.728E+01	0.000E+00	0.517
LA-140	1.379E+00		3.254E+00	5.498E+00	0.000E+00	0.251
CE-141	2.166E+00		4.840E+00	6.777E+00	0.000E+00	0.320
CE-144	5.565E+00		1.897E+01	2.654E+01	0.000E+00	0.210
EU-152	-9.108E+00		7.655E+00	1.018E+01	0.000E+00	-0.895
EU-154	-9.951E-01		4.397E+00	7.218E+00	0.000E+00	-0.138
AC-228	-1.588E+00		7.581E+00	1.201E+01	0.000E+00	-0.132
U-235	1.920E+01		1.971E+01	2.764E+01	0.000E+00	0.694
U-238	2.921E+01		2.084E+02	3.467E+02	0.000E+00	0.084
AM-241	6.878E+00		2.143E+01	2.956E+01	0.000E+00	0.233

A,10L28777-14 ,06/02/2006 04:53,05/25/2006 11:09, 3.594E+00,WG L28777-14 D
B,10L28777-14 ,LIBD ,06/01/2006 08:22,1035L091004

C,K-40	,YES,	2.352E+01,	3.420E+01,	3.098E+01,,	0.759
C,RA-226	,YES,	2.339E+01,	4.311E+01,	8.147E+01,,	0.287
C,TH-228	,YES,	1.512E+00,	3.332E+00,	6.047E+00,,	0.250
C,TH-232	,YES,	1.575E+01,	6.047E+00,	1.198E+01,,	1.315
C,BE-7	,NO ,	1.756E+00,	1.792E+01,	2.926E+01,,	0.060
C,NA-24	,NO ,	-1.483E+04,	8.855E+03,	1.302E+04,,	-1.139
C,CR-51	,NO ,	-1.462E+01,	2.009E+01,	3.261E+01,,	-0.448
C,MN-54	,NO ,	-5.980E-01,	2.000E+00,	3.222E+00,,	-0.186
C,CO-57	,NO ,	-3.001E-01,	2.124E+00,	3.491E+00,,	-0.086
C,CO-58	,NO ,	2.589E+00,	2.033E+00,	3.489E+00,,	0.742
C,FE-59	,NO ,	-1.567E+00,	3.953E+00,	6.384E+00,,	-0.245
C,CO-60	,NO ,	-6.553E-01,	1.918E+00,	3.063E+00,,	-0.214
C,ZN-65	,NO ,	6.949E+00,	5.238E+00,	7.851E+00,,	0.885
C,SE-75	,NO ,	-7.342E-01,	2.782E+00,	4.592E+00,,	-0.160
C,SR-85	,NO ,	1.727E+01,	2.332E+00,	4.504E+00,,	3.835
C,Y-88	,NO ,	-1.085E+00,	2.111E+00,	3.327E+00,,	-0.326
C,NB-94	,NO ,	3.034E-01,	1.924E+00,	3.178E+00,,	0.095
C,NB-95	,NO ,	-2.425E-01,	2.028E+00,	3.304E+00,,	-0.073
C,ZR-95	,NO ,	2.240E+00,	3.602E+00,	6.042E+00,,	0.371
C,MO-99	,NO ,	5.907E+01,	9.724E+01,	1.631E+02,,	0.362
C,RU-103	,NO ,	1.815E+00,	2.257E+00,	3.758E+00,,	0.483
C,RU-106	,NO ,	-2.771E+01,	1.893E+01,	2.837E+01,,	-0.977
C,AG-110m	,NO ,	-3.635E-01,	1.903E+00,	3.113E+00,,	-0.117
C,SN-113	,NO ,	1.089E+00,	2.690E+00,	4.456E+00,,	0.244
C,SB-124	,NO ,	1.650E+00,	4.698E+00,	3.351E+00,,	0.493
C,SB-125	,NO ,	-3.261E+00,	5.701E+00,	9.166E+00,,	-0.356
C,TE-129M	,NO ,	1.748E+01,	2.612E+01,	4.340E+01,,	0.403
C,I-131	,NO ,	6.275E-02,	3.853E+00,	6.252E+00,,	0.010
C,BA-133	,NO ,	1.301E+01,	3.406E+00,	5.315E+00,,	2.447
C,CS-134	,NO ,	1.037E+01,	4.487E+00,	3.947E+00,,	2.626
C,CS-136	,NO ,	-1.852E+00,	2.827E+00,	4.489E+00,,	-0.412
C,CS-137	,NO ,	-1.125E+00,	2.087E+00,	3.369E+00,,	-0.334
C,CE-139	,NO ,	-1.362E+00,	2.147E+00,	3.477E+00,,	-0.392
C,BA-140	,NO ,	8.927E+00,	1.014E+01,	1.728E+01,,	0.517
C,LA-140	,NO ,	1.379E+00,	3.254E+00,	5.498E+00,,	0.251
C,CE-141	,NO ,	2.166E+00,	4.840E+00,	6.777E+00,,	0.320
C,CE-144	,NO ,	5.565E+00,	1.897E+01,	2.654E+01,,	0.210
C,EU-152	,NO ,	-9.108E+00,	7.655E+00,	1.018E+01,,	-0.895
C,EU-154	,NO ,	-9.951E-01,	4.397E+00,	7.218E+00,,	-0.138
C,AC-228	,NO ,	-1.588E+00,	7.581E+00,	1.201E+01,,	-0.132
C,U-235	,NO ,	1.920E+01,	1.971E+01,	2.764E+01,,	0.694
C,U-238	,NO ,	2.921E+01,	2.084E+02,	3.467E+02,,	0.084
C,AM-241	,NO ,	6.878E+00,	2.143E+01,	2.956E+01,,	0.233

Sec. Review: KB Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 2-JUN-2006 11:12:26.57
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 2-JUN-2006 09:10:41.38

LIMS No., Customer Name, Client ID: L28777-15 WG EXELON/DRES

Sample ID : 04L28777-15
Sample Type : WG
Quantity : 3.58990E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 14:45:00.
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 02:01:41.89
Live time : 0 02:01:40.55

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	3	76.87*	39	143	0.91	154.20	9.83E-01	5.34E-03	54.7	9.44E+00
2	1	84.67*	10	192	1.79	169.79	1.20E+00	1.36E-03	258.9	2.33E+00
3	1	139.65*	65	243	2.34	279.75	1.82E+00	8.92E-03	46.9	1.91E+00
4	1	237.38	37	252	1.14	475.18	1.53E+00	5.03E-03	90.8	5.18E+00
5	1	295.30*	69	127	1.59	590.99	1.32E+00	9.45E-03	35.0	3.44E+00
6	1	351.95*	135	46	1.39	704.25	1.17E+00	1.85E-02	12.7	2.86E+00
7	1	359.96	35	42	1.50	720.27	1.15E+00	4.86E-03	38.3	
8	1	583.46*	19	35	1.98	1167.17	7.99E-01	2.59E-03	67.1	1.33E+00
9	1	595.54	44	55	1.87	1191.30	7.87E-01	5.99E-03	34.6	3.13E+00
10	1	609.24*	129	65	1.46	1218.70	7.73E-01	1.76E-02	16.1	1.72E+00
11	1	1120.98*	49	11	3.95	2241.74	4.81E-01	6.67E-03	21.5	1.81E+00
12	1	1460.60*	2	22	1.84	2920.57	3.92E-01	2.22E-04	755.7	1.22E+00
13	1	1764.22*	40	7	2.97	3527.36	3.43E-01	5.43E-03	22.6	4.86E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	2	10.67*	3.921E-01	3.997E+00	3.997E+00	1511.43

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28777-15

Acquisition date : 2-JUN-2006 09:10:41

Total number of lines in spectrum	13	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	2	15.38%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.997E+00	3.997E+00	60.41E+00	1511.43	
	Total Activity :		3.997E+00	3.997E+00			
	Grand Total Activity :		3.997E+00	3.997E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28777-15

Acquisition date : 2-JUN-2006 09:10:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	76.87	39	143	0.91	154.20	147	10	5.34E-03	****	9.83E-01	
1	84.67	10	192	1.79	169.79	166	8	1.36E-03	****	1.20E+00	
1	139.65	65	243	2.34	279.75	275	10	8.92E-03	93.7	1.82E+00	
1	237.38	37	252	1.14	475.18	472	13	5.03E-03	****	1.53E+00	
1	295.30	69	127	1.59	590.99	585	11	9.45E-03	69.9	1.32E+00	
1	351.95	135	46	1.39	704.25	697	39	1.85E-02	25.3	1.17E+00	
1	359.96	35	42	1.50	720.27	697	39	4.86E-03	76.5	1.15E+00	
1	583.46	19	35	1.98	1167.17	1164	11	2.59E-03	****	7.99E-01	T
1	595.54	44	55	1.87	1191.30	1189	11	5.99E-03	69.3	7.87E-01	
1	609.24	129	65	1.46	1218.70	1213	13	1.76E-02	32.2	7.73E-01	
1	1120.98	49	11	3.95	2241.74	2234	15	6.67E-03	42.9	4.81E-01	
1	1764.22	40	7	2.97	3527.36	3520	14	5.43E-03	45.2	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	2	15.38%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.997E+00	3.997E+00	60.41E+00	1511.43	
	Total Activity :		3.997E+00	3.997E+00			

Grand Total Activity : 3.997E+00 3.997E+00

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.997E+00	6.041E+01	6.029E+01	0.000E+00	0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	1.519E+01	3.303E+01	5.633E+01	0.000E+00	0.270
NA-24	-2.455E-02	1.305E-02	Half-Life too short		
CR-51	-1.011E+01	3.771E+01	6.117E+01	0.000E+00	-0.165
MN-54	-1.316E+00	3.263E+00	5.083E+00	0.000E+00	-0.259
CO-57	-1.824E+00	3.579E+00	5.880E+00	0.000E+00	-0.310
CO-58	-4.038E+00	4.128E+00	6.131E+00	0.000E+00	-0.659
FE-59	6.793E+00	8.021E+00	1.427E+01	0.000E+00	0.476
CO-60	3.846E+00	4.497E+00	8.399E+00	0.000E+00	0.458
ZN-65	1.057E+01	1.070E+01	1.671E+01	0.000E+00	0.633
SE-75	-7.344E-01	5.002E+00	8.265E+00	0.000E+00	-0.089
SR-85	1.561E+01	4.627E+00	8.920E+00	0.000E+00	1.750
Y-88	-2.598E+00	4.414E+00	6.545E+00	0.000E+00	-0.397
NB-94	2.930E+00	3.937E+00	6.855E+00	0.000E+00	0.427
NB-95	4.244E+00	3.975E+00	7.113E+00	0.000E+00	0.597
ZR-95	-8.401E+00	6.831E+00	9.893E+00	0.000E+00	-0.849
MO-99	5.774E+01	2.002E+02	3.377E+02	0.000E+00	0.171
RU-103	-1.067E+00	4.241E+00	6.870E+00	0.000E+00	-0.155
RU-106	-1.400E+01	3.647E+01	5.637E+01	0.000E+00	-0.248
AG-110m	1.270E+00	3.645E+00	6.219E+00	0.000E+00	0.204
SN-113	2.134E+00	5.236E+00	8.722E+00	0.000E+00	0.245
SB-124	-7.276E+00	1.072E+01	6.233E+00	0.000E+00	-1.167
SB-125	-3.995E+00	1.065E+01	1.731E+01	0.000E+00	-0.231
TE-129M	1.216E+01	4.714E+01	7.946E+01	0.000E+00	0.153
I-131	-3.072E-01	8.361E+00	1.152E+01	0.000E+00	-0.027
BA-133	1.207E+01	5.688E+00	1.030E+01	0.000E+00	1.171
CS-134	9.460E+00	9.639E+00	8.582E+00	0.000E+00	1.102
CS-136	5.090E+00	5.253E+00	9.370E+00	0.000E+00	0.543
CS-137	1.801E+00	3.890E+00	6.698E+00	0.000E+00	0.269
CE-139	3.438E+00	3.852E+00	6.571E+00	0.000E+00	0.523
BA-140	1.609E+01	2.031E+01	3.520E+01	0.000E+00	0.457
LA-140	7.644E-01	6.572E+00	1.104E+01	0.000E+00	0.069
CE-141	2.329E+00	8.488E+00	1.224E+01	0.000E+00	0.190
CE-144	-1.762E+01	3.251E+01	4.502E+01	0.000E+00	-0.391
EU-152	3.938E+00	1.339E+01	1.907E+01	0.000E+00	0.206
EU-154	-1.249E+00	7.430E+00	1.236E+01	0.000E+00	-0.101
RA-226	1.020E+01	9.216E+01	1.544E+02	0.000E+00	0.066
AC-228	4.756E-01	1.429E+01	2.488E+01	0.000E+00	0.019
TH-228	6.656E+00	7.613E+00	1.317E+01	0.000E+00	0.506
TH-232	4.744E-01	1.425E+01	2.481E+01	0.000E+00	0.019
U-235	7.791E+00	3.341E+01	4.809E+01	0.000E+00	0.162
U-238	-8.973E+01	3.922E+02	6.303E+02	0.000E+00	-0.142
AM-241	-3.742E+01	3.316E+01	5.255E+01	0.000E+00	-0.712

A,04L28777-15 ,06/02/2006 11:12,05/25/2006 14:45, 3.590E+00,L28777-15 WG E
B,04L28777-15 ,LIBD ,06/02/2006 09:04,0435L090804

C,K-40	,YES,	3.997E+00,	6.041E+01,	6.029E+01,,	0.066
C,BE-7	,NO ,	1.519E+01,	3.303E+01,	5.633E+01,,	0.270
C,CR-51	,NO ,	-1.011E+01,	3.771E+01,	6.117E+01,,	-0.165
C,MN-54	,NO ,	-1.316E+00,	3.263E+00,	5.083E+00,,	-0.259
C,CO-57	,NO ,	-1.824E+00,	3.579E+00,	5.880E+00,,	-0.310
C,CO-58	,NO ,	-4.038E+00,	4.128E+00,	6.131E+00,,	-0.659
C,FE-59	,NO ,	6.793E+00,	8.021E+00,	1.427E+01,,	0.476
C,CO-60	,NO ,	3.846E+00,	4.497E+00,	8.399E+00,,	0.458
C,ZN-65	,NO ,	1.057E+01,	1.070E+01,	1.671E+01,,	0.633
C,SE-75	,NO ,	-7.344E-01,	5.002E+00,	8.265E+00,,	-0.089
C,SR-85	,NO ,	1.561E+01,	4.627E+00,	8.920E+00,,	1.750
C,Y-88	,NO ,	-2.598E+00,	4.414E+00,	6.545E+00,,	-0.397
C,NB-94	,NO ,	2.930E+00,	3.937E+00,	6.855E+00,,	0.427
C,NB-95	,NO ,	4.244E+00,	3.975E+00,	7.113E+00,,	0.597
C,ZR-95	,NO ,	-8.401E+00,	6.831E+00,	9.893E+00,,	-0.849
C,MO-99	,NO ,	5.774E+01,	2.002E+02,	3.377E+02,,	0.171
C,RU-103	,NO ,	-1.067E+00,	4.241E+00,	6.870E+00,,	-0.155
C,RU-106	,NO ,	-1.400E+01,	3.647E+01,	5.637E+01,,	-0.248
C,AG-110m	,NO ,	1.270E+00,	3.645E+00,	6.219E+00,,	0.204
C,SN-113	,NO ,	2.134E+00,	5.236E+00,	8.722E+00,,	0.245
C,SB-124	,NO ,	-7.276E+00,	1.072E+01,	6.233E+00,,	-1.167
C,SB-125	,NO ,	-3.995E+00,	1.065E+01,	1.731E+01,,	-0.231
C,TE-129M	,NO ,	1.216E+01,	4.714E+01,	7.946E+01,,	0.153
C,I-131	,NO ,	-3.072E-01,	8.361E+00,	1.152E+01,,	-0.027
C,BA-133	,NO ,	1.207E+01,	5.688E+00,	1.030E+01,,	1.171
C,CS-134	,NO ,	9.460E+00,	9.639E+00,	8.582E+00,,	1.102
C,CS-136	,NO ,	5.090E+00,	5.253E+00,	9.370E+00,,	0.543
C,CS-137	,NO ,	1.801E+00,	3.890E+00,	6.698E+00,,	0.269
C,CE-139	,NO ,	3.438E+00,	3.852E+00,	6.571E+00,,	0.523
C,BA-140	,NO ,	1.609E+01,	2.031E+01,	3.520E+01,,	0.457
C,LA-140	,NO ,	7.644E-01,	6.572E+00,	1.104E+01,,	0.069
C,CE-141	,NO ,	2.329E+00,	8.488E+00,	1.224E+01,,	0.190
C,CE-144	,NO ,	-1.762E+01,	3.251E+01,	4.502E+01,,	-0.391
C,EU-152	,NO ,	3.938E+00,	1.339E+01,	1.907E+01,,	0.206
C,EU-154	,NO ,	-1.249E+00,	7.430E+00,	1.236E+01,,	-0.101
C,RA-226	,NO ,	1.020E+01,	9.216E+01,	1.544E+02,,	0.066
C,AC-228	,NO ,	4.756E-01,	1.429E+01,	2.488E+01,,	0.019
C,TH-228	,NO ,	6.656E+00,	7.613E+00,	1.317E+01,,	0.506
C,TH-232	,NO ,	4.744E-01,	1.425E+01,	2.481E+01,,	0.019
C,U-235	,NO ,	7.791E+00,	3.341E+01,	4.809E+01,,	0.162
C,U-238	,NO ,	-8.973E+01,	3.922E+02,	6.303E+02,,	-0.142
C,AM-241	,NO ,	-3.742E+01,	3.316E+01,	5.255E+01,,	-0.712

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28851

Exelon - Dresden

June 21, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28851
EX001-3ESPDRES-06

06/21/2006 11:18

Sample Receipt

The following samples were received on June 7, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-DSP-149R-053106-JH-019	L28851-1	
WG-DN-DSP-149R-053106-JH-020	L28851-2	
WS-DN-SW-103-053106-JH-021	L28851-3	
WG-DN-DSP-159S-053106-JH-022	L28851-4	
WS-DN-SW-101-053106-JH-023	L28851-5	
WS-DN-SW-102-053106-JH-024	L28851-6	
WS-DN-SW-105-060106-JH-025	L28851-7	
WS-DN-SW-104-060106-JH-026	L28851-8	
WS-DN-SW-106-060106-JH-027	L28851-9	
WS-DN-SW-106-060106-JH-028	L28851-10	
WG-DN-MW-DN-110S-053006-JL-067	L28851-11	
WG-DN-MW-DN-110I-053006-JL-068	L28851-12	
WG-DN-MW-DN-104S-053006-JL-069	L28851-13	
WG-DN-MW-DN-109I-053106-JL-070	L28851-14	
WG-DN-MW-DN-109I-053106-JL-071	L28851-15	
WG-DN-MW-DN-109S-053106-JL-072	L28851-16	
WG-DN-MW-DN-111S-053106-JL-073	L28851-17	
WG-DN-MW-DN-107S-053106-JL-074	L28851-18	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28851
EX001-3ESPDRES-06

06/21/2006 11:18

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4124.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-149R-053106-JH-019	L28851-1	WG4124-1

H-3

Quality Control

Quality control samples were analyzed as WG4115,WG4122.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-TMI-1D-060106-JC-021	L28841-3	WG4115-3
WG-DN-MW-DN-110S-053006-JL-067	L28851-11	WG4122-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28851
EX001-3ESPDRES-06

06/21/2006 11:18

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4161.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-149R-053106-JH-019	L28851-1	WG4161-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

06/07/06 12:32

SR #: SR08746

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06

LIMS #: L28853

Initiated By: BWILKERSON
Init Date: 06/07/06 Receive Date: 06/07/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes	No	NA	Comment
1	Shipping container custody seals present and intact.			NA	
2	Sample container custody seals present and intact.			NA	
3	Sample containers received in good condition	Y			
4	Chain of custody received with samples	Y			
5	All samples listed on chain of custody received	Y			
6	Sample container labels present and legible.	Y			
7	Information on container labels correspond with chain of custody	Y			
8	Sample(s) properly preserved and in appropriate container(s)	Y			Ph at or below 2
9	Other (Describe)			NA	

L28851

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Exelon - Dresden

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hoffmann **PRINTED NAME:** john hoffmann

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	PARAMETERS: Sr-89/90	PARAMETERS: Gamma Spec.	REMARKS
1	5/31/06	1000	WG-DN-DSP-149R-053106-JH-019	WATER	2	X	X	X	
2		1040	WG-DN-DSP-149R-053106-JH-020						
3		1140	WS-DN-SW-103-053106-JH-021						
4		1330	WG-DN-DSP-159S-053106-JH-022						
5		1430	WS-DN-SW-101-053106-JH-023						
6		1520	WS-DN-SW-102-053106-JH-024						
			TOTAL NUMBER OF CONTAINERS		12				

RELINQUISHED BY: (1) John Hoffmann	DATE: 5/31/06 TIME: 16:50	RECEIVED BY: (2)	DATE: 5-31-06 TIME: 1650
RELINQUISHED BY: (2)	DATE: 6-5-06 TIME: 1345	RECEIVED BY: (3)	DATE: TIME:
RELINQUISHED BY: (3)	DATE: TIME:	RECEIVED BY: (4)	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, Kendall Ramagoja

RECEIVED FOR LABORATORY BY: BWilkerson DATE: 6-7-06 TIME: 8 AM

1276D

1001-00(SOURCE)GN-CO004

L 28851

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive
Waterloo, Ont. N2V 1C2, (519)884-0510

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

SAMPLER'S SIGNATURE: John Hoffmann PRINTED NAME: john hoffmann

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Tritium	Sr-89/90	Gamma Spec	REMARKS
1	6/1/06	0900	WS-DN-SW-105-060106-JH-025	WATER	2	X	X	X	
2		0940	WS-DN-SW-104-060106-JH-026						
3		1120	WS-DN-SW-106-060106-JH-027						
4		1145	WS-DN-SW-106-060106-JH-028						

TOTAL NUMBER OF CONTAINERS: 8 HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: ① John Hoffmann	DATE: 6/1/06 TIME: 16:33	RECEIVED BY: ② Edward Cole	DATE: 6-1-06 TIME: 1633
RELINQUISHED BY: ② Egt	DATE: 6-5-06 TIME: 1345	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: WAY BILL No.

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM: john hoffmann, Kendall Rannagja

RECEIVED FOR LABORATORY BY: B Wilkerson DATE: 6-7-06 TIME: 8 AM

Nº 17699

1001 (D) SEPT 28/93(W) REV.0 (F-42)

L28851 8 of 145

L28851

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 451360-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Luzwick **PRINTED NAME:** Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Strontium 89/90	Gamma Spec	REMARKS
	~~5/30/06~~	~~1055~~	~~WG-DN-DSP-DN-127-053006-JL-066~~	W	2	X	X	X	Disregard
	5/30/06	1410	WG-DN-MW-DN-110S-053006-JL-067	W	2	X	X	X	
		1515	WG-DN-MW-DN-110I-053006-JL-068	W	2	X	X	X	
	↓	1700	WG-DN-MW-DN-104S-053006-JL-069	W	2	X	X	X	

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① Julie Luzwick	DATE: 5/30/06 TIME: 1745	RECEIVED BY: ② Abram Cook	DATE: 5-30-06 TIME: 1752
RELINQUISHED BY: ② [signature]	DATE: 6-5-06 TIME: 1345	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: J. Luzwick, N. Hill

RECEIVED FOR LABORATORY BY: B Wilkerson 12768
DATE: 6-7-06 TIME: 8 AM

1001-00(SOURCE)GN-CO004

L28851

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 451136-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Luzwick **PRINTED NAME:** Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Strontium 89&90	Comm Spec	REMARKS
	5/31/06	1015	WG-DN-MW-~~109~~DN-109I-053106-JL-070	W	2	X	X	X	
		1025	WG-DN-MW-DN-109I-053106-JL-071	W	2	X	X	X	
		1145	WG-DN-MW-DN-109S-053106-JL-072	W	2	X	X	X	
		1400	WG-DN-MW-DN-111S-053106-JL-073	W	2	X	X	X	
		1530	WG-DN-MW-DN-105-053106-JL-074	W	2	X	X	X	
TOTAL NUMBER OF CONTAINERS					10				

RELINQUISHED BY: ① Julie Luzwick	DATE: 5/31/06 TIME:	RECEIVED BY: ② Shaw Cook	DATE: 5-31-06 TIME: 1625
RELINQUISHED BY: ② [illegible]	DATE: 6-5-06 TIME: 1345	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Julie L. Nick H.

RECEIVED FOR LABORATORY BY: B Wilkerson 12772
DATE: 6-7-06 TIME: 8 AM

1001-00(SOURCE)GN-CO004

L28851 10 of 145

Internal Chain of Custody

06/21/06 11:18 Teledyne Brown Engineering

Internal Chain of Custody

****

Sample # L28851-1 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28851-1 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****

Sample # L28851-2 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28851-2 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****

Sample # L28851-3 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28851-3 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ

****
Sample # L28851-3 Containernum 2

SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-4 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian
06/09/2006 11:34	099999 Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-4 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-5 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian
06/09/2006 11:34	099999 Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-5 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-6 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-6 Containernum 1

Relinquish Date			Received By	
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-6 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-7 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-7 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-8 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-8 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-9 Containernum 1

Prod	Analyst

****
Sample # L28851-9 Containernum 1

GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-9 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-10 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-10 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-11 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-11 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ

****
Sample # L28851-11 Containernum 2

SR-90 (FAST) LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-12 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian
06/09/2006 11:34	099999 Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-12 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-13 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian
06/09/2006 11:34	099999 Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-13 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-14 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****
Sample # L28851-14 Containernum 1

Relinquish Date			Received By	
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-14 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-15 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-15 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-16 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28851-16 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****
Sample # L28851-17 Containernum 1

Prod	Analyst

Internal Chain of Custody

****

Sample # L28851-17 Containernum 1

GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28851-17 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

****

Sample # L28851-18 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian
06/09/2006 11:34	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28851-18 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/07/2006 00:00			099999	Sample Custodian

06/21/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28851

****

L28851-1 **WG** **WG-DN-DSP-149R-053106-JH-019**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	H-3	SO	06/09/06
Aliquot	GELI	DW	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/12/06
Count Room	H-3	KOJ	06/12/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-2 **WG** **WG-DN-DSP-149R-053106-JH-020**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	H-3	SO	06/09/06
Aliquot	GELI	DW	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/12/06
Count Room	H-3	KOJ	06/12/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-3 **WG** **WS-DN-SW-103-053106-JH-021**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/12/06
Count Room	H-3	KOJ	06/12/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-4 **WG** **WG-DN-DSP-159S-053106-JH-022**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/12/06
Count Room	H-3	KOJ	06/12/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-5 **WG** **WS-DN-SW-101-053106-JH-023**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28851

L28851-5	**WG**	**WS-DN-SW-101-053106-JH-023**		
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-6	**WG**	**WS-DN-SW-102-053106-JH-024**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		KOJ	06/12/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-7	**WG**	**WS-DN-SW-105-060106-JH-025**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		KOJ	06/12/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/21/06

****

L28851-8	**WG**	**WS-DN-SW-104-060106-JH-026**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-9	**WG**	**WS-DN-SW-106-060106-JH-027**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-10	**WG**	**WS-DN-SW-106-060106-JH-028**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28851

L28851-10	**WG**	**WS-DN-SW-106-060106-JH-028**		
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-11	**WG**	**WG-DN-MW-DN-110S-053006-JL-067**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/12/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-12	**WG**	**WG-DN-MW-DN-110I-053006-JL-068**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/13/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-13	**WG**	**WG-DN-MW-DN-104S-053006-JL-069**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/13/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

****

L28851-14	**WG**	**WG-DN-MW-DN-109I-053106-JL-070**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/07/06
Aliquot	GELI		DW	06/10/06
Aliquot	H-3		EJ	06/10/06
Aliquot	SR-90 (FAST)		LCB	06/14/06
Count Room	GELI		ILL	06/13/06
Count Room	H-3		KOJ	06/13/06
Count Room	SR-90 (FAST)		KOJ	06/20/06

06/21/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28851

****

L28851-15 **WG** **WG-DN-MW-DN-109I-053106-JL-071**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KPW	06/13/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-16 **WG** **WG-DN-MW-DN-109S-053106-JL-072**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KPW	06/13/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-17 **WG** **WG-DN-MW-DN-111S-053106-JL-073**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/13/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28851-18 **WG** **WG-DN-MW-DN-107S-053106-JL-074**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/13/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

Analytical Results Summary

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-149R-053106-JH-019** (WG)
Station:
Description:
LIMS Number: L28851-1

Collect Start: 05/31/2006 10:00
Collect Stop:
Receive Date: 06/07/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**6.68E+02**	1.44E+02	1.72E+02	pCi/L		10	ml		06/12/06	60	M	+		
TOTAL SR	2018	3.50E-01	7.55E-01	**1.48E+00**	pCi/L		450	ml	05/31/06 10:00	06/20/06	120	M	U		
MN-54	2007	6.31E-01	2.18E+00	**3.64E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
CO-58	2007	-2.54E+00	2.49E+00	**3.86E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
FE-59	2007	4.80E+00	5.09E+00	**8.85E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
CO-60	2007	6.03E-01	2.75E+00	**4.31E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
ZN-65	2007	2.23E+00	4.78E+00	**8.08E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
NB-95	2007	3.02E-01	2.28E+00	**3.79E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
ZR-95	2007	6.97E-01	4.18E+00	**6.97E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
CS-134	2007	-1.13E+00	4.10E+00	**3.91E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
CS-137	2007	9.09E-01	2.35E+00	**3.90E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
BA-140	2007	7.75E+00	1.40E+01	**2.38E+01**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No
LA-140	2007	-7.56E-01	4.74E+00	**7.75E+00**	pCi/L		3096.73	ml	05/31/06 10:00	06/12/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-149R-053106-JH-020** Collect Start: 05/31/2006 10:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**6.94E+02**	1.43E+02	1.70E+02	pCi/L		10	ml		06/12/06	60	M	+		
TOTAL SR	2018	1.26E+00	9.74E-01	**1.78E+00**	pCi/L		450	ml	05/31/06 10:40	06/20/06	120	M	U		
MN-54	2007	1.33E+00	1.96E+00	**3.34E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
CO-58	2007	-9.97E-01	2.09E+00	**3.38E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
FE-59	2007	5.92E-01	4.22E+00	**7.04E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
CO-60	2007	-4.38E-02	1.95E+00	**3.18E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
ZN-65	2007	3.28E+00	3.94E+00	**6.83E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
NB-95	2007	-5.84E-01	2.03E+00	**3.33E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
ZR-95	2007	-1.17E-01	3.63E+00	**5.88E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
CS-134	2007	-1.64E+00	2.16E+00	**3.46E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
CS-137	2007	8.70E-01	2.02E+00	**3.38E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
BA-140	2007	6.82E+00	1.31E+01	**2.22E+01**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No
LA-140	2007	-1.33E+00	4.26E+00	**6.85E+00**	pCi/L		3131.8	ml	05/31/06 10:40	06/12/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WS-DN-SW-103-053106-JH-021** Collect Start: 05/31/2006 11:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-1.73E+01	1.03E+02	**1.71E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	6.53E-01	6.07E-01	**1.12E+00**	pCi/L		450	ml	05/31/06 11:40	06/20/06	120	M	U		
MN-54	2007	3.82E-01	2.18E+00	**3.63E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
CO-58	2007	-5.49E-01	2.43E+00	**3.97E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
FE-59	2007	1.49E+00	5.10E+00	**8.59E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
CO-60	2007	7.63E-01	2.21E+00	**3.71E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
ZN-65	2007	-7.34E-01	5.78E+00	**7.97E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
NB-95	2007	3.76E-01	2.36E+00	**3.95E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
ZR-95	2007	-1.88E-01	4.16E+00	**6.89E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
CS-134	2007	-7.66E-01	5.63E+00	**3.84E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
CS-137	2007	4.16E-01	2.39E+00	**3.92E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
BA-140	2007	4.19E+00	1.53E+01	**2.56E+01**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No
LA-140	2007	5.80E+00	5.07E+00	**9.02E+00**	pCi/L		3013.9	ml	05/31/06 11:40	06/12/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-159S-053106-JH-022** Collect Start: 05/31/2006 13:30 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-2.15E+00	1.03E+02	**1.70E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	8.99E-01	5.54E-01	**9.79E-01**	pCi/L		450	ml	05/31/06 13:30	06/20/06	120	M	U		
MN-54	2007	-3.03E-01	2.12E+00	**3.44E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
CO-58	2007	-8.80E-01	2.34E+00	**3.76E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
FE-59	2007	4.29E+00	4.76E+00	**8.26E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
CO-60	2007	6.50E-01	2.16E+00	**3.61E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
ZN-65	2007	1.10E+00	4.64E+00	**7.78E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
NB-95	2007	2.86E+00	2.35E+00	**4.08E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
ZR-95	2007	1.14E-01	4.22E+00	**6.94E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
CS-134	2007	1.79E+00	3.82E+00	**3.86E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
CS-137	2007	1.63E+00	2.33E+00	**3.96E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
BA-140	2007	5.83E+00	1.48E+01	**2.45E+01**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No
LA-140	2007	4.21E-01	4.72E+00	**7.89E+00**	pCi/L		3420.15	ml	05/31/06 13:30	06/12/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WS-DN-SW-101-053106-JH-023**
Station:
Description:
LIMS Number: L28851-5

Collect Start: 05/31/2006 14:30
Collect Stop:
Receive Date: 06/07/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-8.58E+01	9.69E+01	**1.70E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	1.32E+00	8.46E-01	**1.48E+00**	pCi/L		450	ml	05/31/06 14:30	06/20/06	120	M	U		
MN-54	2007	1.23E+00	2.10E+00	**3.56E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
CO-58	2007	1.58E+00	2.20E+00	**3.76E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
FE-59	2007	4.99E+00	4.80E+00	**8.34E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
CO-60	2007	-1.26E+00	2.21E+00	**3.51E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
ZN-65	2007	-9.86E-01	4.43E+00	**7.19E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
NB-95	2007	1.75E+00	2.10E+00	**3.63E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
ZR-95	2007	-4.16E-01	3.92E+00	**6.47E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
CS-134	2007	3.43E+00	4.06E+00	**3.42E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
CS-137	2007	2.39E+00	2.40E+00	**3.88E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
BA-140	2007	4.87E+00	1.35E+01	**2.27E+01**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No
LA-140	2007	3.51E+00	4.35E+00	**7.63E+00**	pCi/L		3190.64	ml	05/31/06 14:30	06/12/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WS-DN-SW-102-053106-JH-024** Collect Start: 05/31/2006 15:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-6

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-3.66E+01	1.01E+02	**1.71E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	1.02E+00	8.81E-01	**1.61E+00**	pCi/L		450	ml	05/31/06 15:20	06/20/06	120	M	U		
MN-54	2007	1.92E+00	2.37E+00	**3.98E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
CO-58	2007	-1.86E+00	2.37E+00	**3.73E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
FE-59	2007	1.53E+00	5.02E+00	**8.33E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
CO-60	2007	3.12E-01	2.35E+00	**3.89E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
ZN-65	2007	7.27E+00	5.88E+00	**8.76E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
NB-95	2007	1.25E+00	2.49E+00	**4.17E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
ZR-95	2007	-3.68E+00	4.40E+00	**6.98E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
CS-134	2007	1.59E+00	5.36E+00	**3.84E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
CS-137	2007	1.78E+00	2.41E+00	**4.09E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
BA-140	2007	-1.04E+01	1.51E+01	**2.41E+01**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No
LA-140	2007	1.83E+00	4.62E+00	**7.84E+00**	pCi/L		3090.05	ml	05/31/06 15:20	06/12/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WS-DN-SW-105-060106-JH-025** Collect Start: 06/01/2006 09:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-7

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values	
H-3	2010	3.13E+01	1.02E+02	**1.65E+02**	pCi/L		10	ml		06/12/06	60	M	U	
TOTAL SR	2018	6.92E-01	7.52E-01	**1.43E+00**	pCi/L		450	ml	06/01/06 09:00	06/21/06	100	M	U	
K-40	2007	**8.43E+01**	4.29E+01	3.87E+01	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	+	Yes
MN-54	2007	9.74E-02	2.49E+00	**4.10E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
CO-58	2007	-8.67E-01	2.58E+00	**4.19E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
FE-59	2007	5.97E+00	5.17E+00	**9.12E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
CO-60	2007	-4.20E-01	2.63E+00	**4.24E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
ZN-65	2007	2.35E+00	5.04E+00	**8.55E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
NB-95	2007	8.42E-01	2.62E+00	**4.40E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
ZR-95	2007	3.41E-01	4.79E+00	**7.97E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
CS-134	2007	4.86E+00	3.85E+00	**4.32E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
CS-137	2007	1.85E+00	2.67E+00	**4.49E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
BA-140	2007	-4.24E+00	1.60E+01	**2.61E+01**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No
LA-140	2007	-1.76E+00	5.23E+00	**8.37E+00**	pCi/L		3088.11	ml	06/01/06 09:00	06/12/06	28800	Sec	U	No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WS-DN-SW-104-060106-JH-026** Collect Start: 06/01/2006 09:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-8

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-4.88E+01	9.84E+01	**1.68E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	1.66E+00	9.69E-01	**1.69E+00**	pCi/L		450	ml	06/01/06 09:40	06/20/06	120	M	U		
MN-54	2007	-1.32E+00	3.04E+00	**4.76E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
CO-58	2007	5.46E-01	3.22E+00	**5.31E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
FE-59	2007	1.79E+00	6.74E+00	**1.12E+01**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
CO-60	2007	2.95E+00	3.67E+00	**5.65E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		Yes
ZN-65	2007	3.47E+00	6.10E+00	**1.06E+01**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
NB-95	2007	3.16E-02	3.14E+00	**5.14E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
ZR-95	2007	9.65E-01	5.63E+00	**9.34E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
CS-134	2007	7.74E-01	3.68E+00	**5.42E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
CS-137	2007	4.62E-01	3.16E+00	**5.29E+00**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
BA-140	2007	-2.26E+00	1.89E+01	**3.07E+01**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No
LA-140	2007	1.66E-01	7.19E+00	**1.18E+01**	pCi/L		3121.66	ml	06/01/06 09:40	06/13/06	11782	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WS-DN-SW-106-060106-JH-027** Collect Start: 06/01/2006 11:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-9

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-5.31E+01	9.83E+01	**1.68E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	8.99E-01	8.92E-01	**1.68E+00**	pCi/L		450	ml	06/01/06 11:20	06/20/06	120	M	U		
MN-54	2007	9.51E-01	2.72E+00	**4.60E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
CO-58	2007	4.46E-01	2.96E+00	**4.94E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
FE-59	2007	-2.12E-01	6.40E+00	**1.06E+01**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
CO-60	2007	-5.56E-01	2.90E+00	**4.65E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
ZN-65	2007	9.89E-01	6.00E+00	**1.01E+01**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
NB-95	2007	-2.84E-01	2.95E+00	**4.88E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
ZR-95	2007	-2.64E+00	5.21E+00	**8.17E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
CS-134	2007	4.59E+00	5.49E+00	**5.26E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
CS-137	2007	-5.40E-01	2.94E+00	**4.76E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
BA-140	2007	-3.14E+00	1.83E+01	**3.01E+01**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No
LA-140	2007	4.92E-01	5.97E+00	**9.89E+00**	pCi/L		3297.96	ml	06/01/06 11:20	06/13/06	11822	Sec	U		No

Flag Values
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High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

Bolded text indicates reportable value.

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WS-DN-SW-106-060106-JH-028** Collect Start: 06/01/2006 11:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-10

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	5.38E+01	1.07E+02	**1.70E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	1.25E+00	9.60E-01	**1.75E+00**	pCi/L		450	ml	06/01/06 11:45	06/20/06	120	M	U		
MN-54	2007	1.35E+00	2.74E+00	**4.88E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
CO-58	2007	1.18E+00	2.94E+00	**5.22E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
FE-59	2007	-1.52E+00	5.86E+00	**1.01E+01**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
CO-60	2007	8.01E-01	2.69E+00	**4.86E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
ZN-65	2007	3.32E+00	5.87E+00	**1.07E+01**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
NB-95	2007	2.50E+00	2.98E+00	**5.40E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
ZR-95	2007	-3.78E+00	5.33E+00	**8.82E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
CS-134	2007	-1.66E+00	3.64E+00	**5.14E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
CS-137	2007	3.02E+00	2.96E+00	**5.42E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
BA-140	2007	1.08E+01	1.83E+01	**3.19E+01**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No
LA-140	2007	2.50E+00	5.17E+00	**9.74E+00**	pCi/L		3216.63	ml	06/01/06 11:45	06/13/06	12902	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-110S-053006-JL-067** Collect Start: 05/30/2006 14:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-11

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	9.55E+01	1.11E+02	**1.72E+02**	pCi/L		10	ml		06/12/06	60	M	U		
TOTAL SR	2018	1.20E+00	7.15E-01	**1.25E+00**	pCi/L		450	ml	05/30/06 14:10	06/20/06	120	M	U		
MN-54	2007	1.67E+00	3.13E+00	**5.34E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
CO-58	2007	-2.07E+00	3.43E+00	**5.39E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
FE-59	2007	8.71E+00	6.84E+00	**1.25E+01**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
CO-60	2007	7.05E-01	3.32E+00	**5.61E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
ZN-65	2007	5.20E+00	6.72E+00	**1.18E+01**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
NB-95	2007	2.06E+00	3.60E+00	**6.18E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
ZR-95	2007	-2.85E+00	6.06E+00	**9.69E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
CS-134	2007	1.86E+00	6.05E+00	**6.22E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
CS-137	2007	1.31E+00	3.25E+00	**5.33E+00**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
BA-140	2007	5.58E+00	2.21E+01	**3.72E+01**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No
LA-140	2007	4.73E+00	7.88E+00	**1.36E+01**	pCi/L		3253.44	ml	05/30/06 14:10	06/13/06	9361	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-110I-053006-JL-068** Collect Start: 05/30/2006 15:15 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-12

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**5.16E+02**	1.34E+02	1.70E+02	pCi/L		10	ml		06/13/06	60	M	+		
TOTAL SR	2018	4.61E-01	7.46E-01	**1.44E+00**	pCi/L		450	ml	05/30/06 15:15	06/20/06	120	M	U		
MN-54	2007	-2.06E+00	3.10E+00	**4.74E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
CO-58	2007	1.54E+00	3.57E+00	**6.01E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
FE-59	2007	3.90E+00	7.97E+00	**1.35E+01**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
CO-60	2007	1.05E+00	3.76E+00	**6.27E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
ZN-65	2007	3.02E+00	7.05E+00	**1.21E+01**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
NB-95	2007	1.32E+00	3.26E+00	**5.51E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
ZR-95	2007	-1.66E+00	6.08E+00	**9.74E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
CS-134	2007	1.89E+00	5.61E+00	**5.75E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
CS-137	2007	1.48E+00	3.38E+00	**5.76E+00**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
BA-140	2007	-1.99E+00	2.25E+01	**3.67E+01**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No
LA-140	2007	-1.03E+01	7.90E+00	**1.08E+01**	pCi/L		3074.72	ml	05/30/06 15:15	06/13/06	10800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-104S-053006-JL-069** Collect Start: 05/30/2006 17:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-13

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.13E+02	1.12E+02	**1.73E+02**	pCi/L		10	ml		06/13/06	60	M	U		
TOTAL SR	2018	-2.64E-01	5.63E-01	**1.20E+00**	pCi/L		450	ml	05/30/06 17:20	06/20/06	120	M	U		
MN-54	2007	3.25E+00	2.88E+00	**5.17E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
CO-58	2007	-3.26E+00	3.18E+00	**4.82E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
FE-59	2007	-1.04E-01	6.70E+00	**1.11E+01**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
CO-60	2007	-1.83E+00	3.14E+00	**4.82E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
ZN-65	2007	3.50E+00	6.70E+00	**1.15E+01**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
NB-95	2007	-6.58E-01	3.45E+00	**5.66E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
ZR-95	2007	-1.32E+00	6.14E+00	**9.81E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
CS-134	2007	-9.95E-01	3.31E+00	**5.36E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
CS-137	2007	3.02E+00	3.06E+00	**5.36E+00**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
BA-140	2007	-1.49E+00	2.14E+01	**3.54E+01**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	
LA-140	2007	1.06E+00	7.16E+00	**1.20E+01**	pCi/L		3200.42	ml	05/30/06 17:20	06/13/06	8716	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-109I-053106-JL-070** Collect Start: 05/31/2006 10:15 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-14

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**3.62E+03**	4.13E+02	2.91E+02	pCi/L		10	ml		06/13/06	21.07	M	+	High	
TOTAL SR	2018	8.21E-01	7.95E-01	**1.49E+00**	pCi/L		450	ml	05/31/06 10:15	06/20/06	120	M	U		
MN-54	2007	2.07E+00	2.51E+00	**4.53E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
CO-58	2007	-6.36E-01	2.77E+00	**4.70E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
FE-59	2007	1.68E+00	5.25E+00	**9.42E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
CO-60	2007	1.82E+00	2.44E+00	**4.52E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
ZN-65	2007	2.22E+00	5.15E+00	**9.28E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
NB-95	2007	3.30E+00	2.88E+00	**5.25E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
ZR-95	2007	-1.23E+00	5.03E+00	**8.55E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
CS-134	2007	5.85E+00	2.99E+00	**5.01E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U*		No
CS-137	2007	-2.30E-01	2.72E+00	**4.69E+00**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
BA-140	2007	8.46E+00	1.79E+01	**3.10E+01**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No
LA-140	2007	2.73E+00	5.41E+00	**1.01E+01**	pCi/L		3158.8	ml	05/31/06 10:15	06/13/06	15269	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

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No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-109I-053106-JL-071** Collect Start: 05/31/2006 10:25 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-15

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**3.75E+03**	4.24E+02	2.90E+02	pCi/L		10	ml		06/13/06	19.8	M	+	High	
TOTAL SR	2018	2.27E-01	6.80E-01	**1.35E+00**	pCi/L		450	ml	05/31/06 10:25	06/20/06	120	M	U		
MN-54	2007	2.72E-02	2.57E+00	**4.23E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
CO-58	2007	-2.31E+00	2.94E+00	**4.65E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
FE-59	2007	4.03E-01	5.84E+00	**9.69E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
CO-60	2007	4.31E-01	2.82E+00	**4.65E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
ZN-65	2007	8.65E+00	5.70E+00	**1.02E+01**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
NB-95	2007	9.66E-01	2.93E+00	**4.93E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
ZR-95	2007	8.03E-01	5.31E+00	**8.87E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
CS-134	2007	3.56E+00	3.99E+00	**4.66E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
CS-137	2007	-3.05E+00	2.94E+00	**4.55E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
BA-140	2007	-5.91E+00	1.84E+01	**3.00E+01**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No
LA-140	2007	-4.15E+00	6.36E+00	**9.91E+00**	PCI/WG		3317.72	ml	05/31/06 10:25	06/13/06	26734	Sec	U		No

Flag Values
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-109S-053106-JL-072** Collect Start: 05/31/2006 11:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-16

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**2.51E+02**	1.20E+02	1.71E+02	pCi/L		10	ml		06/13/06	60	M	+		
TOTAL SR	2018	4.04E-01	6.87E-01	**1.33E+00**	pCi/L		450	ml	05/31/06 11:45	06/20/06	120	M	U		
MN-54	2007	5.46E-01	2.39E+00	**4.15E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
CO-58	2007	-1.68E+00	2.52E+00	**4.17E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
FE-59	2007	-6.47E-01	6.43E+00	**9.35E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
CO-60	2007	-1.36E+00	2.22E+00	**3.70E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
ZN-65	2007	9.42E+00	4.89E+00	**9.30E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U*		No
NB-95	2007	1.20E+00	2.51E+00	**4.43E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
ZR-95	2007	-1.47E+00	4.58E+00	**7.74E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
CS-134	2007	2.60E+00	2.66E+00	**4.23E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
CS-137	2007	1.14E+00	2.53E+00	**4.45E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
BA-140	2007	6.47E+00	1.64E+01	**2.82E+01**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No
LA-140	2007	-1.66E+00	5.31E+00	**9.19E+00**	pCi/L		3238.78	ml	05/31/06 11:45	06/13/06	16889	Sec	U		No

Flag Values
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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-111S-053106-JL-073** Collect Start: 05/31/2006 14:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-17

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**6.38E+02**	1.40E+02	1.69E+02	pCi/L		10	ml		06/13/06	60	M	+		
TOTAL SR	2018	2.35E-01	7.14E-01	**1.42E+00**	pCi/L		450	ml	05/31/06 14:00	06/20/06	120	M	U		
MN-54	2007	-1.19E+00	2.36E+00	**3.73E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
CO-58	2007	-1.52E+00	2.68E+00	**4.23E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
FE-59	2007	4.61E+00	5.26E+00	**9.04E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
CO-60	2007	1.15E+00	3.04E+00	**4.82E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
ZN-65	2007	3.33E+00	4.84E+00	**8.38E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
NB-95	2007	9.56E-01	2.59E+00	**4.32E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
ZR-95	2007	-5.12E+00	4.56E+00	**7.00E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
CS-134	2007	2.71E+00	4.43E+00	**4.14E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
CS-137	2007	1.61E+00	2.47E+00	**4.21E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
BA-140	2007	5.14E+00	1.58E+01	**2.63E+01**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No
LA-140	2007	-1.79E+00	5.96E+00	**9.54E+00**	pCi/L		2985.79	ml	05/31/06 14:00	06/13/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

Report of Analysis

06/21/06 11:17

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28851

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-107S-053106-JL-074** Collect Start: 05/31/2006 15:30 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28851-18

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.04E+03**	1.65E+02	1.77E+02	pCi/L		10	ml		06/13/06	54.4	M	+		
TOTAL SR	2018	1.16E+00	1.00E+00	**1.83E+00**	pCi/L		450	ml	05/31/06 15:30	06/20/06	120	M	U		
MN-54	2007	1.33E+00	2.02E+00	**3.43E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
CO-58	2007	9.81E-02	2.17E+00	**3.59E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
FE-59	2007	9.11E-01	4.47E+00	**7.48E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
CO-60	2007	-8.53E-01	2.15E+00	**3.43E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
ZN-65	2007	4.57E+00	4.45E+00	**7.75E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
NB-95	2007	4.99E-01	2.21E+00	**3.71E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
ZR-95	2007	-2.79E+00	4.05E+00	**6.35E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
CS-134	2007	3.59E+00	3.48E+00	**3.68E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
CS-137	2007	1.35E+00	2.08E+00	**3.51E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
BA-140	2007	-9.69E-01	1.40E+01	**2.32E+01**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No
LA-140	2007	-1.08E-01	4.65E+00	**7.62E+00**	pCi/L		3063.42	ml	05/31/06 15:30	06/13/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

QC Results Summary

QC Summary Report for L28851

6/21/2006 12:18:55PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4115-1	H-3	WO	06/11/2006 18:14	< 1.640E+00	pCi/Total	U	P
WG4122-1		WO	06/13/2006 20:30	< 1.790E-02	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4115-2	H-3	WO	06/11/2006 19:17	5.05E+002	5.380E+02	pCi/Total	106.6	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										
WG4122-2		WO	06/13/2006 21:33	5.05E+002	4.950E+02	pCi/Total	98.1	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4115-3 L28841-3	H-3	WG	06/11/2006 19:35	4.400E+02	3.140E+02	pCi/L		<30	*	NE
WG4122-3 L28851-11		WG	06/13/2006 0:34	< 1.720E+02	< 1.710E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28851

6/21/2006 12:18:55PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28851 **H-3**

Associated Samples for **WG4115**

SAMPLENUM	CLIENTID
L28851-1	WG-DN-DSP-149R-053106-JH-019
L28851-2	WG-DN-DSP-149R-053106-JH-020
L28851-3	WS-DN-SW-103-053106-JH-021
L28851-4	WG-DN-DSP-159S-053106-JH-022
L28851-5	WS-DN-SW-101-053106-JH-023
L28851-6	WS-DN-SW-102-053106-JH-024
L28851-7	WS-DN-SW-105-060106-JH-025
L28851-8	WS-DN-SW-104-060106-JH-026
L28851-9	WS-DN-SW-106-060106-JH-027
L28851-10	WS-DN-SW-106-060106-JH-028

Associated Samples for **WG4122**

SAMPLENUM	CLIENTID
L28851-11	WG-DN-MW-DN-110S-053006-JL-067
L28851-12	WG-DN-MW-DN-110I-053006-JL-068
L28851-13	WG-DN-MW-DN-104S-053006-JL-069
L28851-14	WG-DN-MW-DN-109I-053106-JL-070
L28851-15	WG-DN-MW-DN-109I-053106-JL-071
L28851-16	WG-DN-MW-DN-109S-053106-JL-072
L28851-17	WG-DN-MW-DN-111S-053106-JL-073
L28851-18	WG-DN-MW-DN-107S-053106-JL-074

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28851

6/21/2006 12:18:55PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4161-1	TOTAL SR	WO	06/20/2006 18:09	< 6.990E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4161-2	TOTAL SR	WO	06/20/2006 18:09	5.84E+001	6.340E+01	pCi/Total	108.6	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4161-3 L28851-1	TOTAL SR	WG	06/20/2006 18:09	< 1.480E+00	< 1.610E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 21 2006, 11:31 am

Work Order: *L28851* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28851-1		H-3					0		12-jun-06 12:49	LS7	288	60	1.73	60	.207		SO
WG-DN-DSP-149R-053106-				10 ml													
Activity: 6.68E+02 * Error: 1.44E+02				MDC: 1.72E+02													
L28851-2		H-3					0		12-jun-06 13:53	LS7	298	60	1.73	60	.211		SO
WG-DN-DSP-149R-053106-				10 ml													
Activity: 6.94E+02 * Error: 1.43E+02				MDC: 1.7E+02													
L28851-3		H-3					0		12-jun-06 14:57	LS7	99	60	1.73	60	.209		EJ
WS-DN-SW-103-053106-JH				10 ml													
Activity: -1.73E+01 Error: 1.03E+02				MDC: 1.71E+02 *													
L28851-4		H-3					0		12-jun-06 16:01	LS7	103	60	1.73	60	.21		EJ
WG-DN-DSP-159S-053106-				10 ml													
Activity: -2.15E+00 Error: 1.03E+02				MDC: 1.7E+02 *													
L28851-5		H-3					0		12-jun-06 17:05	LS7	80	60	1.73	60	.21		EJ
WS-DN-SW-101-053106-JH				10 ml													
Activity: -8.58E+01 Error: 9.69E+01				MDC: 1.7E+02 *													
L28851-6		H-3					0		12-jun-06 18:09	LS7	94	60	1.73	60	.209		EJ
WS-DN-SW-102-053106-JH				10 ml													
Activity: -3.66E+01 Error: 1.01E+02				MDC: 1.71E+02 *													
L28851-7		H-3					0		12-jun-06 19:13	LS7	113	60	1.73	60	.216		EJ
WS-DN-SW-105-060106-JH				10 ml													
Activity: 3.13E+01 Error: 1.02E+02				MDC: 1.65E+02 *													
L28851-8		H-3					0		12-jun-06 20:17	LS7	90	60	1.73	60	.213		EJ
WS-DN-SW-104-060106-JH				10 ml													
Activity: -4.88E+01 Error: 9.84E+01				MDC: 1.68E+02 *													
L28851-9		H-3					0		12-jun-06 21:21	LS7	89	60	1.73	60	.212		EJ
WS-DN-SW-106-060106-JH				10 ml													
Activity: -5.31E+01 Error: 9.83E+01				MDC: 1.68E+02 *													
L28851-10		H-3					0		12-jun-06 22:25	LS7	119	60	1.73	60	.21		EJ
WS-DN-SW-106-060106-JH				10 ml													
Activity: 5.38E+01 Error: 1.07E+02				MDC: 1.7E+02 *													
L28851-11		H-3					0		12-jun-06 23:30	LS7	130	60	1.73	60	.208		EJ
WG-DN-MW-DN-110S-05300				10 ml													
Activity: 9.55E+01 Error: 1.11E+02				MDC: 1.72E+02 *													
L28851-12		H-3					0		13-jun-06 01:38	LS7	248	60	1.73	60	.211		EJ
WG-DN-MW-DN-110I-05300				10 ml													
Activity: 5.16E+02 * Error: 1.34E+02				MDC: 1.7E+02													
L28851-13		H-3					0		13-jun-06 02:42	LS7	135	60	1.73	60	.207		EJ
WG-DN-MW-DN-104S-05300				10 ml													
Activity: 1.13E+02 Error: 1.12E+02				MDC: 1.73E+02 *													
L28851-14		H-3					0		13-jun-06 03:46	LS7	387	21.07	1.73	60	.207		EJ
WG-DN-MW-DN-109I-05310				10 ml													
Activity: 3.62E+03 * Error: 4.13E+02				MDC: 2.91E+02													
L28851-15		H-3					0		13-jun-06 04:11	LS7	387	19.8	1.73	60	.215		EJ
WG-DN-MW-DN-109I-05310				10 ml													
Activity: 3.75E+03 * Error: 4.24E+02				MDC: 2.9E+02													
L28851-16		H-3					0		13-jun-06 04:34	LS7	173	60	1.73	60	.209		EJ
WG-DN-MW-DN-109S-05310				10 ml													
Activity: 2.51E+02 * Error: 1.2E+02				MDC: 1.71E+02													

Raw Data Sheet (rawdata)
Jun 21 2006, 11:31 am

Work Order: *L28851* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28851-17		H-3					0		13-jun-06	LS7	283	60	1.73	60	.211		EJ
WG-DN-MW-DN-111S-05310				10 ml					05:38								
Activity: 6.38E+02 * Error: 1.4E+02				MDC: 1.69E+02													
L28851-18		H-3					0		13-jun-06	LS7	359	54.4	1.73	60	.212		EJ
WG-DN-MW-DN-107S-05310				10 ml					06:43								
Activity: 1.04E+03 * Error: 1.65E+02				MDC: 1.77E+02													

Raw Data Sheet (rawdata)
Jun 21 2006, 11:31 am

Work Order: *L28851* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28851-1		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X1A	103	120	308	400	.346	.999	LCB
WG-DN-DSP-149R-053106-			10:00	450 ml	13:00			73.12	18:05								
Activity: 3.5E-01	Error: 7.55E-01		MDC: 1.48E+00 *														
L28851-2		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X1B	136	120	342	400	.343	.999	LCB
WG-DN-DSP-149R-053106-			10:40	450 ml	13:00			64.52	18:05								
Activity: 1.26E+00	Error: 9.74E-01		MDC: 1.78E+00 *														
L28851-3		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X1C	112	120	289	400	.354	.999	LCB
WS-DN-SW-103-053106-JH			11:40	450 ml	13:00			91.40	18:05								
Activity: 6.53E-01	Error: 6.07E-01		MDC: 1.12E+00 *														
L28851-4		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X1D	135	120	312	400	.344	.999	LCB
WG-DN-DSP-159S-053106-			13:30	450 ml	13:00			111.83	18:05								
Activity: 8.99E-01	Error: 5.54E-01		MDC: 9.79E-01 *														
L28851-5		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X2A	116	120	264	400	.354	.999	LCB
WS-DN-SW-101-053106-JH			14:30	450 ml	13:00			65.86	18:05								
Activity: 1.32E+00	Error: 8.46E-01		MDC: 1.48E+00 *														
L28851-6		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X2B	114	120	289	400	.345	.999	LCB
WS-DN-SW-102-053106-JH			15:20	450 ml	13:00			65.05	18:05								
Activity: 1.02E+00	Error: 8.81E-01		MDC: 1.61E+00 *														
L28851-7		TOTAL SR	01-jun-06		20-jun-06		0		21-jun-06	Y1D	96	100	305	400	.362	.999	LCB
WS-DN-SW-105-060106-JH			09:00	450 ml	13:00			79.03	00:37								
Activity: 6.92E-01	Error: 7.52E-01		MDC: 1.43E+00 *														
L28851-8		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X2D	136	120	307	400	.343	.999	LCB
WS-DN-SW-104-060106-JH			09:40	450 ml	13:00			64.25	18:05								
Activity: 1.66E+00	Error: 9.69E-01		MDC: 1.69E+00 *														
L28851-9		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X3A	135	120	363	400	.335	.999	LCB
WS-DN-SW-106-060106-JH			11:20	450 ml	13:00			72.31	18:05								
Activity: 8.99E-01	Error: 8.92E-01		MDC: 1.68E+00 *														
L28851-10		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X3B	129	120	321	400	.343	.999	LCB
WS-DN-SW-106-060106-JH			11:45	450 ml	13:00			63.71	18:05								
Activity: 1.25E+00	Error: 9.6E-01		MDC: 1.75E+00 *														
L28851-11		TOTAL SR	30-may-06		20-jun-06		0		20-jun-06	X3C	130	120	294	400	.345	.999	LCB
WG-DN-MW-DN-110S-05300			14:10	450 ml	13:00			84.68	18:05								
Activity: 1.2E+00	Error: 7.15E-01		MDC: 1.25E+00 *														
L28851-12		TOTAL SR	30-may-06		20-jun-06		0		20-jun-06	X4A	99	120	284	400	.358	.999	LCB
WG-DN-MW-DN-110I-05300			15:15	450 ml	13:00			69.89	18:05								
Activity: 4.61E-01	Error: 7.46E-01		MDC: 1.44E+00 *														
L28851-13		TOTAL SR	30-may-06		20-jun-06		0		20-jun-06	X4C	80	120	299	400	.35	.999	LCB
WG-DN-MW-DN-104S-05300			17:20	450 ml	13:00			87.63	18:05								
Activity: -2.64E-01	Error: 5.63E-01		MDC: 1.2E+00 *														
L28851-14		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	X4D	128	120	340	400	.353	.999	LCB
WG-DN-MW-DN-109I-05310			10:15	450 ml	13:00			75.00	18:05								
Activity: 8.21E-01	Error: 7.95E-01		MDC: 1.49E+00 *														
L28851-15		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	Y1D	99	120	305	400	.362	.999	LCB
WG-DN-MW-DN-109I-05310			10:25	450 ml	13:00			76.34	18:09								
Activity: 2.27E-01	Error: 6.8E-01		MDC: 1.35E+00 *														
L28851-16		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	Y2A	97	120	280	400	.349	.999	LCB
WG-DN-MW-DN-109S-05310			11:45	450 ml	13:00			77.15	18:09								
Activity: 4.04E-01	Error: 6.87E-01		MDC: 1.33E+00 *														

Raw Data Sheet (rawdata)
Jun 21 2006, 11:31 am

Work Order: *L28851* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28851-17		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	Y2B	102	120	315	400	.356	.999	LCB
WG-DN-MW-DN-111S-05310			14:00	450 ml	13:00			75.00	18:09								
Activity: 2.35E-01 Error: 7.14E-01 MDC: 1.42E+00 *																	
L28851-18		TOTAL SR	31-may-06		20-jun-06		0		20-jun-06	Y2C	107	120	268	400	.35	.999	LCB
WG-DN-MW-DN-107S-05310			15:30	450 ml	13:00			54.57	18:09								
Activity: 1.16E+00 Error: 1E+00 MDC: 1.83E+00 *																	

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 13:19:01.23
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 13-JUN-2006 10:02:15.18

LIMS No., Customer Name, Client ID: WG WG4124-1 DRESDEN

Sample ID : 13WG4124-1
Sample Type : WG
Quantity : 3.09670E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 10:00:00.
Geometry : 133L082404
BKGFILE : 13BG060306MT
Real Time : 0 03:16:34.34
Live time : 0 03:16:31.01

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	2	139.84*	76	319	1.26	279.65	2.27E+00	6.47E-03	44.9	1.85E+00
2	2	143.54*	51	302	1.27	287.04	2.28E+00	4.35E-03	64.4	
3	1	185.88*	32	394	1.21	371.74	2.18E+00	2.70E-03	133.4	2.87E+00
4	1	198.13*	130	360	2.61	396.23	2.13E+00	1.10E-02	31.6	2.28E+00
5	1	238.33*	16	283	1.08	476.64	1.94E+00	1.34E-03	212.4	3.46E+00
6	1	583.19*	2	95	1.63	1166.52	1.04E+00	2.07E-04	916.9	1.12E+00
7	1	596.85	51	132	1.50	1193.84	1.02E+00	4.35E-03	49.5	6.96E+00
8	1	608.98*	39	99	1.48	1218.12	1.01E+00	3.35E-03	58.1	1.90E+00
9	1	1000.14*	77	16	5.20	2000.84	6.84E-01	6.57E-03	15.3	1.12E+01
10	1	1461.27*	1	56	2.19	2923.84	5.14E-01	4.49E-05	*****	4.41E-01
11	1	1765.79	41	27	5.38	3533.53	4.55E-01	3.49E-03	36.3	2.29E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	1	10.67*	5.142E-01	7.147E-01	7.147E-01	8160.85
RA-226	186.21	32	3.28*	2.178E+00	3.293E+01	3.293E+01	266.90
TH-228	238.63	16	44.60*	1.939E+00	1.355E+00	1.373E+00	424.82
	240.98	------	3.95	1.927E+00	------ Line Not Found		------
U-235	143.76	51	10.50*	2.277E+00	1.587E+01	1.587E+01	128.80
	163.35	------	4.70	2.256E+00	------ Line Not Found		------
	185.71	32	54.00	2.178E+00	2.000E+00	2.000E+00	266.90
	205.31	------	4.70	2.093E+00	------ Line Not Found		------
U-238	766.41	------	0.21	8.425E-01	------ Line Not Found		------
	1001.03	77	0.92*	6.843E-01	9.106E+02	9.106E+02	30.69

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13WG4124-1

Acquisition date : 13-JUN-2006 10:02:15

Total number of lines in spectrum	11	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	6	54.55%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.147E-01	7.147E-01	583.3E-01	8160.85	
RA-226	1600.00Y	1.00	3.293E+01	3.293E+01	8.789E+01	266.90	
TH-228	1.91Y	1.01	1.355E+00	1.373E+00	5.833E+00	424.82	
U-235	7.04E+08Y	1.00	1.587E+01	1.587E+01	2.044E+01	128.80	
U-238	4.47E+09Y	1.00	9.106E+02	9.106E+02	2.795E+02	30.69	
			---------	---------			
	Total Activity :		9.614E+02	9.615E+02			

Grand Total Activity : 9.614E+02 9.615E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13WG4124-1

Acquisition date : 13-JUN-2006 10:02:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	139.84	76	319	1.26	279.65	276	18	6.47E-03	89.8	2.27E+00	
1	198.13	130	360	2.61	396.23	391	12	1.10E-02	63.1	2.13E+00	
1	583.19	2	95	1.63	1166.52	1161	12	2.07E-04	****	1.04E+00	T
1	596.85	51	132	1.50	1193.84	1185	14	4.35E-03	98.9	1.02E+00	
1	608.98	39	99	1.48	1218.12	1214	11	3.35E-03	****	1.01E+00	
1	1765.79	41	27	5.38	3533.53	3523	21	3.49E-03	72.6	4.55E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	6	54.55%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.147E-01	7.147E-01	583.3E-01	8160.85	
TH-228	1.91Y	1.01	1.355E+00	1.373E+00	5.833E+00	424.82	
U-235	7.04E+08Y	1.00	2.886E+00	2.886E+00	5.165E+00	179.00	
U-238	4.47E+09Y	1.00	9.106E+02	9.106E+02	2.795E+02	30.69	
	Total Activity :		9.155E+02	9.155E+02			

Grand Total Activity : 9.155E+02 9.155E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
U-235	185.71	RA-226	186.21

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.147E-01	5.833E+01	4.838E+01	0.000E+00	0.015
TH-228	1.373E+00	5.833E+00	8.109E+00	0.000E+00	0.169
U-235	2.886E+00	5.165E+00	3.308E+01	0.000E+00	0.087
U-238	9.106E+02	2.795E+02	5.049E+02	0.000E+00	1.803

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-8.524E+00		2.877E+01	4.589E+01	0.000E+00	-0.186
NA-24	1.352E-01		2.941E+00	Half-Life too short		
CR-51	-1.751E+01		3.159E+01	5.145E+01	0.000E+00	-0.340
MN-54	6.632E-01		2.842E+00	4.742E+00	0.000E+00	0.140
CO-57	4.402E-01		2.684E+00	4.421E+00	0.000E+00	0.100
CO-58	6.167E-01		3.142E+00	5.239E+00	0.000E+00	0.118
FE-59	3.487E+00		6.687E+00	1.142E+01	0.000E+00	0.305
CO-60	-2.442E-01		2.867E+00	4.703E+00	0.000E+00	-0.052
ZN-65	-1.126E+00		6.537E+00	1.060E+01	0.000E+00	-0.106
SE-75	3.717E+00		3.876E+00	6.552E+00	0.000E+00	0.567
SR-85	2.063E+01		3.752E+00	7.429E+00	0.000E+00	2.777
Y-88	-1.492E+00		3.444E+00	5.379E+00	0.000E+00	-0.277
NB-94	-2.182E-01		2.781E+00	4.609E+00	0.000E+00	-0.047
NB-95	3.567E+00		3.238E+00	5.704E+00	0.000E+00	0.625
ZR-95	-5.423E+00		5.646E+00	8.767E+00	0.000E+00	-0.619
MO-99	-1.903E+02		5.301E+02	8.580E+02	0.000E+00	-0.222
RU-103	2.147E+00		3.418E+00	5.862E+00	0.000E+00	0.366
RU-106	-8.968E+00		2.721E+01	4.367E+01	0.000E+00	-0.205
AG-110m	1.459E-01		2.808E+00	4.591E+00	0.000E+00	0.032
SN-113	-2.430E+00		3.739E+00	5.952E+00	0.000E+00	-0.408
SB-124	-2.300E+00		7.545E+00	5.164E+00	0.000E+00	-0.445
SB-125	3.036E+00		7.922E+00	1.318E+01	0.000E+00	0.230
TE-129M	8.661E+00		4.068E+01	6.682E+01	0.000E+00	0.130
I-131	-7.996E+00		8.263E+00	1.303E+01	0.000E+00	-0.614
BA-133	3.422E-01		3.859E+00	6.406E+00	0.000E+00	0.053
CS-134	2.045E+00		6.703E+00	5.207E+00	0.000E+00	0.393
CS-136	-5.413E-01		5.328E+00	8.704E+00	0.000E+00	-0.062
CS-137	3.677E-01		3.297E+00	5.268E+00	0.000E+00	0.070
CE-139	1.251E+00		2.876E+00	4.702E+00	0.000E+00	0.266
BA-140	-2.318E+00		1.947E+01	3.201E+01	0.000E+00	-0.072
LA-140	8.192E+00		7.018E+00	1.264E+01	0.000E+00	0.648
CE-141	4.531E+00		6.833E+00	9.783E+00	0.000E+00	0.463
CE-144	-1.475E+01		2.345E+01	3.326E+01	0.000E+00	-0.444
EU-152	-1.401E+01		9.006E+00	1.398E+01	0.000E+00	-1.002
EU-154	3.040E+00		5.502E+00	9.164E+00	0.000E+00	0.332
RA-226	3.293E+01		8.789E+01	1.238E+02	0.000E+00	0.266
AC-228	-7.090E+00		1.229E+01	1.890E+01	0.000E+00	-0.375
TH-232	-7.060E+00		1.224E+01	1.882E+01	0.000E+00	-0.375
AM-241	-3.275E+01		2.429E+01	3.752E+01	0.000E+00	-0.873

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A,13WG4124-1       ,06/13/2006 13:19,05/31/2006 10:00,   3.097E+00,WG WG4124-1 DR
B,13WG4124-1       ,LIBD                ,06/13/2006 09:43,133L082404
C,K-40     ,YES,    7.147E-01,    5.833E+01,    4.838E+01,,     0.015
C,TH-228   ,YES,    1.373E+00,    5.833E+00,    8.109E+00,,     0.169
C,U-235    ,YES,    2.886E+00,    5.165E+00,    3.308E+01,,     0.087
C,U-238    ,YES,    9.106E+02,    2.795E+02,    5.049E+02,,     1.803
C,BE-7     ,NO ,   -8.524E+00,    2.877E+01,    4.589E+01,,    -0.186
C,CR-51    ,NO ,   -1.751E+01,    3.159E+01,    5.145E+01,,    -0.340
C,MN-54    ,NO ,    6.632E-01,    2.842E+00,    4.742E+00,,     0.140
C,CO-57    ,NO ,    4.402E-01,    2.684E+00,    4.421E+00,,     0.100
C,CO-58    ,NO ,    6.167E-01,    3.142E+00,    5.239E+00,,     0.118
C,FE-59    ,NO ,    3.487E+00,    6.687E+00,    1.142E+01,,     0.305
C,CO-60    ,NO ,   -2.442E-01,    2.867E+00,    4.703E+00,,    -0.052
C,ZN-65    ,NO ,   -1.126E+00,    6.537E+00,    1.060E+01,,    -0.106
C,SE-75    ,NO ,    3.717E+00,    3.876E+00,    6.552E+00,,     0.567
C,SR-85    ,NO ,    2.063E+01,    3.752E+00,    7.429E+00,,     2.777
C,Y-88     ,NO ,   -1.492E+00,    3.444E+00,    5.379E+00,,    -0.277
C,NB-94    ,NO ,   -2.182E-01,    2.781E+00,    4.609E+00,,    -0.047
C,NB-95    ,NO ,    3.567E+00,    3.238E+00,    5.704E+00,,     0.625
C,ZR-95    ,NO ,   -5.423E+00,    5.646E+00,    8.767E+00,,    -0.619
C,MO-99    ,NO ,   -1.903E+02,    5.301E+02,    8.580E+02,,    -0.222
C,RU-103   ,NO ,    2.147E+00,    3.418E+00,    5.862E+00,,     0.366
C,RU-106   ,NO ,   -8.968E+00,    2.721E+01,    4.367E+01,,    -0.205
C,AG-110m  ,NO ,    1.459E-01,    2.808E+00,    4.591E+00,,     0.032
C,SN-113   ,NO ,   -2.430E+00,    3.739E+00,    5.952E+00,,    -0.408
C,SB-124   ,NO ,   -2.300E+00,    7.545E+00,    5.164E+00,,    -0.445
C,SB-125   ,NO ,    3.036E+00,    7.922E+00,    1.318E+01,,     0.230
C,TE-129M  ,NO ,    8.661E+00,    4.068E+01,    6.682E+01,,     0.130
C,I-131    ,NO ,   -7.996E+00,    8.263E+00,    1.303E+01,,    -0.614
C,BA-133   ,NO ,    3.422E-01,    3.859E+00,    6.406E+00,,     0.053
C,CS-134   ,NO ,    2.045E+00,    6.703E+00,    5.207E+00,,     0.393
C,CS-136   ,NO ,   -5.413E-01,    5.328E+00,    8.704E+00,,    -0.062
C,CS-137   ,NO ,    3.677E-01,    3.297E+00,    5.268E+00,,     0.070
C,CE-139   ,NO ,    1.251E+00,    2.876E+00,    4.702E+00,,     0.266
C,BA-140   ,NO ,   -2.318E+00,    1.947E+01,    3.201E+01,,    -0.072
C,LA-140   ,NO ,    8.192E+00,    7.018E+00,    1.264E+01,,     0.648
C,CE-141   ,NO ,    4.531E+00,    6.833E+00,    9.783E+00,,     0.463
C,CE-144   ,NO ,   -1.475E+01,    2.345E+01,    3.326E+01,,    -0.444
C,EU-152   ,NO ,   -1.401E+01,    9.006E+00,    1.398E+01,,    -1.002
C,EU-154   ,NO ,    3.040E+00,    5.502E+00,    9.164E+00,,     0.332
C,RA-226   ,NO ,    3.293E+01,    8.789E+01,    1.238E+02,,     0.266
C,AC-228   ,NO ,   -7.090E+00,    1.229E+01,    1.890E+01,,    -0.375
C,TH-232   ,NO ,   -7.060E+00,    1.224E+01,    1.882E+01,,    -0.375
C,AM-241   ,NO ,   -3.275E+01,    2.429E+01,    3.752E+01,,    -0.873
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 05:24:55.47
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:24:47.95

LIMS No., Customer Name, Client ID: WG L28851-1 EX DRES

Sample ID : 04L28851-1
Sample Type : WG
Quantity : 3.09670E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 10:00:00.
Geometry : 043L082004
BKGFILE : 04BG060306MT
Real Time : 0 06:00:03.61
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.52*	219	601	1.22	133.61	6.71E-01	1.01E-02	21.4	3.47E+00
2	1	93.21*	68	474	1.92	187.04	1.55E+00	3.16E-03	67.2	3.87E+00
3	1	139.76	149	484	1.17	280.19	2.04E+00	6.90E-03	26.9	2.66E+00
4	1	185.76*	62	426	1.62	372.25	1.92E+00	2.87E-03	69.5	9.31E-01
5	1	198.55*	88	377	1.76	397.86	1.86E+00	4.07E-03	48.2	2.49E+00
6	1	351.41*	3	261	1.77	703.78	1.28E+00	1.25E-04*****		2.12E+00
7	1	582.80*	1	113	2.09	1166.81	8.78E-01	3.04E-05*****		5.71E-01
8	1	595.54	83	118	1.54	1192.29	8.63E-01	3.85E-03	25.4	3.51E+00
9	1	609.21*	2	176	1.42	1219.64	8.49E-01	7.35E-05*****		2.59E+00
10	1	910.95*	10	75	1.31	1823.37	6.21E-01	4.59E-04	209.4	1.86E+00
11	1	1459.94*	23	27	3.46	2921.56	4.30E-01	1.08E-03	87.9	1.10E+00
12	1	1984.38	27	0	2.46	3970.36	3.52E-01	1.25E-03	18.5	2.32E-01
13	1	1990.64	65	12	5.95	3982.87	3.52E-01	3.03E-03	14.8	4.94E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	23	10.67*	4.298E-01	2.057E+01	2.057E+01	175.76
RA-226	186.21	62	3.28*	1.922E+00	3.975E+01	3.975E+01	139.05
AC-228	835.50	------	1.75	6.649E-01	------ Line Not Found		------
	911.07	10	27.70*	6.212E-01	2.328E+00	2.338E+00	418.78
TH-232	583.14	1	30.25	8.776E-01	1.000E-01	1.000E-01	7251.24
	911.07	10	27.70*	6.212E-01	2.328E+00	2.328E+00	418.78
	969.11	------	16.60	5.916E-01	------ Line Not Found		------
U-235	143.76	------	10.50*	2.041E+00	------ Line Not Found		------
	163.35	------	4.70	2.007E+00	------ Line Not Found		------
	185.71	62	54.00	1.922E+00	2.414E+00	2.414E+00	139.05
	205.31	------	4.70	1.833E+00	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28851-1 Acquisition date : 12-JUN-2006 23:24:47

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.057E+01	2.057E+01	3.615E+01	175.76	
RA-226	1600.00Y	1.00	3.975E+01	3.975E+01	5.527E+01	139.05	
AC-228	5.75Y	1.00	2.328E+00	2.338E+00	9.791E+00	418.78	
TH-232	1.41E+10Y	1.00	2.328E+00	2.328E+00	9.750E+00	418.78	
U-235	7.04E+08Y	1.00	2.414E+00	2.414E+00	3.357E+00	139.05	K
	Total Activity :		6.738E+01	6.740E+01			

Grand Total Activity : 6.738E+01 6.740E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28851-1

Acquisition date : 12-JUN-2006 23:24:47

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.52	219	601	1.22	133.61	130	8	1.01E-02	42.8	6.71E-01	
1	93.21	68	474	1.92	187.04	183	9	3.16E-03	****	1.55E+00	
1	139.76	149	484	1.17	280.19	277	8	6.90E-03	53.7	2.04E+00	
1	198.55	88	377	1.76	397.86	394	9	4.07E-03	96.3	1.86E+00	
1	351.41	3	261	1.77	703.78	700	12	1.25E-04	****	1.28E+00	
1	595.54	83	118	1.54	1192.29	1189	9	3.85E-03	50.8	8.63E-01	
1	609.21	2	176	1.42	1219.64	1212	12	7.35E-05	****	8.49E-01	
1	1984.38	27	0	2.46	3970.36	3966	10	1.25E-03	37.0	3.52E-01	
1	1990.64	65	12	5.95	3982.87	3975	16	3.03E-03	29.5	3.52E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.057E+01	2.057E+01	3.615E+01	175.76	
RA-226	1600.00Y	1.00	3.975E+01	3.975E+01	5.527E+01	139.05	
AC-228	5.75Y	1.00	2.228E+00	2.238E+00	12.20E+00	545.38	
TH-232	1.41E+10Y	1.00	1.000E-01	1.000E-01	72.53E-01	7251.24	
	Total Activity :		6.264E+01	6.265E+01			

Grand Total Activity : 6.264E+01 6.265E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.057E+01	3.615E+01	3.617E+01	0.000E+00	0.569
RA-226	3.975E+01	5.527E+01	7.773E+01	0.000E+00	0.511
AC-228	2.238E+00	1.220E+01	1.332E+01	0.000E+00	0.168
TH-232	1.000E-01	7.253E+00	1.476E+01	0.000E+00	0.007

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.209E+01		2.025E+01	3.453E+01	0.000E+00	0.350
NA-24	-1.914E+00		1.462E+00	Half-Life too short		
CR-51	-3.453E+00		2.442E+01	4.032E+01	0.000E+00	-0.086
MN-54	6.310E-01		2.181E+00	3.635E+00	0.000E+00	0.174
CO-57	-1.041E+00		1.977E+00	3.176E+00	0.000E+00	-0.328
CO-58	-2.544E+00		2.490E+00	3.858E+00	0.000E+00	-0.660
FE-59	4.804E+00		5.086E+00	8.848E+00	0.000E+00	0.543
CO-60	6.034E-01		2.745E+00	4.312E+00	0.000E+00	0.140
ZN-65	2.227E+00		4.780E+00	8.080E+00	0.000E+00	0.276
SE-75	-2.050E+00		3.041E+00	4.828E+00	0.000E+00	-0.425
SR-85	1.808E+01		2.952E+00	5.762E+00	0.000E+00	3.138
Y-88	-6.529E-01		2.701E+00	4.332E+00	0.000E+00	-0.151
NB-94	8.291E-01		2.080E+00	3.523E+00	0.000E+00	0.235
NB-95	3.017E-01		2.280E+00	3.791E+00	0.000E+00	0.080
ZR-95	6.969E-01		4.177E+00	6.965E+00	0.000E+00	0.100
MO-99	-3.021E+02		3.768E+02	5.957E+02	0.000E+00	-0.507
RU-103	1.776E+00		2.622E+00	4.473E+00	0.000E+00	0.397
RU-106	-2.104E+01		2.088E+01	3.235E+01	0.000E+00	-0.650
AG-110m	1.192E+00		2.162E+00	3.617E+00	0.000E+00	0.329
SN-113	-4.186E-01		2.927E+00	4.766E+00	0.000E+00	-0.088
SB-124	-7.331E+00		6.863E+00	4.133E+00	0.000E+00	-1.774
SB-125	-3.768E+00		6.327E+00	1.004E+01	0.000E+00	-0.375
TE-129M	3.209E+01		3.014E+01	5.114E+01	0.000E+00	0.628
I-131	-2.707E+00		6.093E+00	9.852E+00	0.000E+00	-0.275
BA-133	3.011E+00		3.269E+00	4.810E+00	0.000E+00	0.626
CS-134	-1.128E+00		4.098E+00	3.909E+00	0.000E+00	-0.289
CS-136	1.400E+00		4.010E+00	6.718E+00	0.000E+00	0.208
CS-137	9.091E-01		2.354E+00	3.904E+00	0.000E+00	0.233
CE-139	-3.787E-01		2.021E+00	3.353E+00	0.000E+00	-0.113
BA-140	7.754E+00		1.403E+01	2.377E+01	0.000E+00	0.326
LA-140	-7.562E-01		4.735E+00	7.751E+00	0.000E+00	-0.098
CE-141	2.456E+00		4.977E+00	6.998E+00	0.000E+00	0.351
CE-144	-7.593E+00		1.740E+01	2.478E+01	0.000E+00	-0.306
EU-152	-7.108E+00		7.590E+00	1.049E+01	0.000E+00	-0.677
EU-154	-1.729E+00		4.055E+00	6.530E+00	0.000E+00	-0.265
TH-228	2.055E+00		4.226E+00	6.798E+00	0.000E+00	0.302
U-235	7.242E+00		1.746E+01	2.449E+01	0.000E+00	0.296
U-238	6.968E+01		2.404E+02	4.050E+02	0.000E+00	0.172
AM-241	-7.655E+00		2.163E+01	3.337E+01	0.000E+00	-0.229

```
A,04L28851-1       ,06/13/2006 05:24,05/31/2006 10:00,   3.097E+00,WG L28851-1 EX
B,04L28851-1       ,LIBD                ,06/12/2006 10:58,043L082004
C,K-40     ,YES,    2.057E+01,   3.615E+01,   3.617E+01,,     0.569
C,RA-226   ,YES,    3.975E+01,   5.527E+01,   7.773E+01,,     0.511
C,AC-228   ,YES,    2.238E+00,   1.220E+01,   1.332E+01,,     0.168
C,TH-232   ,YES,    1.000E-01,   7.253E+00,   1.476E+01,,     0.007
C,BE-7     ,NO ,    1.209E+01,   2.025E+01,   3.453E+01,,     0.350
C,CR-51    ,NO ,   -3.453E+00,   2.442E+01,   4.032E+01,,    -0.086
C,MN-54    ,NO ,    6.310E-01,   2.181E+00,   3.635E+00,,     0.174
C,CO-57    ,NO ,   -1.041E+00,   1.977E+00,   3.176E+00,,    -0.328
C,CO-58    ,NO ,   -2.544E+00,   2.490E+00,   3.858E+00,,    -0.660
C,FE-59    ,NO ,    4.804E+00,   5.086E+00,   8.848E+00,,     0.543
C,CO-60    ,NO ,    6.034E-01,   2.745E+00,   4.312E+00,,     0.140
C,ZN-65    ,NO ,    2.227E+00,   4.780E+00,   8.080E+00,,     0.276
C,SE-75    ,NO ,   -2.050E+00,   3.041E+00,   4.828E+00,,    -0.425
C,SR-85    ,NO ,    1.808E+01,   2.952E+00,   5.762E+00,,     3.138
C,Y-88     ,NO ,   -6.529E-01,   2.701E+00,   4.332E+00,,    -0.151
C,NB-94    ,NO ,    8.291E-01,   2.080E+00,   3.523E+00,,     0.235
C,NB-95    ,NO ,    3.017E-01,   2.280E+00,   3.791E+00,,     0.080
C,ZR-95    ,NO ,    6.969E-01,   4.177E+00,   6.965E+00,,     0.100
C,MO-99    ,NO ,   -3.021E+02,   3.768E+02,   5.957E+02,,    -0.507
C,RU-103   ,NO ,    1.776E+00,   2.622E+00,   4.473E+00,,     0.397
C,RU-106   ,NO ,   -2.104E+01,   2.088E+01,   3.235E+01,,    -0.650
C,AG-110m  ,NO ,    1.192E+00,   2.162E+00,   3.617E+00,,     0.329
C,SN-113   ,NO ,   -4.186E-01,   2.927E+00,   4.766E+00,,    -0.088
C,SB-124   ,NO ,   -7.331E+00,   6.863E+00,   4.133E+00,,    -1.774
C,SB-125   ,NO ,   -3.768E+00,   6.327E+00,   1.004E+01,,    -0.375
C,TE-129M  ,NO ,    3.209E+01,   3.014E+01,   5.114E+01,,     0.628
C,I-131    ,NO ,   -2.707E+00,   6.093E+00,   9.852E+00,,    -0.275
C,BA-133   ,NO ,    3.011E+00,   3.269E+00,   4.810E+00,,     0.626
C,CS-134   ,NO ,   -1.128E+00,   4.098E+00,   3.909E+00,,    -0.289
C,CS-136   ,NO ,    1.400E+00,   4.010E+00,   6.718E+00,,     0.208
C,CS-137   ,NO ,    9.091E-01,   2.354E+00,   3.904E+00,,     0.233
C,CE-139   ,NO ,   -3.787E-01,   2.021E+00,   3.353E+00,,    -0.113
C,BA-140   ,NO ,    7.754E+00,   1.403E+01,   2.377E+01,,     0.326
C,LA-140   ,NO ,   -7.562E-01,   4.735E+00,   7.751E+00,,    -0.098
C,CE-141   ,NO ,    2.456E+00,   4.977E+00,   6.998E+00,,     0.351
C,CE-144   ,NO ,   -7.593E+00,   1.740E+01,   2.478E+01,,    -0.306
C,EU-152   ,NO ,   -7.108E+00,   7.590E+00,   1.049E+01,,    -0.677
C,EU-154   ,NO ,   -1.729E+00,   4.055E+00,   6.530E+00,,    -0.265
C,TH-228   ,NO ,    2.055E+00,   4.226E+00,   6.798E+00,,     0.302
C,U-235    ,NO ,    7.242E+00,   1.746E+01,   2.449E+01,,     0.296
C,U-238    ,NO ,    6.968E+01,   2.404E+02,   4.050E+02,,     0.172
C,AM-241   ,NO ,   -7.655E+00,   2.163E+01,   3.337E+01,,    -0.229
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 05:25:02.23
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:24:51.25

LIMS No., Customer Name, Client ID: WG L28851-2 EX DRES

Sample ID	: 07L28851-2			Smple Date:	31-MAY-2006 10:40:00.
Sample Type	: WG			Geometry	: 073L082504
Quantity	: 3.13180E+00 L			BKGFILE	: 07BG060306MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 06:00:04.13
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 06:00:00.00
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.32*	215	500	1.18	133.20	8.05E-01	9.97E-03	20.0	2.07E+00
2	1	175.25	100	354	1.33	351.25	2.33E+00	4.62E-03	32.8	1.04E+00
3	1	198.38*	176	474	0.95	397.53	2.25E+00	8.15E-03	26.3	7.53E-01
4	1	596.31	82	194	1.74	1193.80	1.10E+00	3.78E-03	36.1	8.93E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28851-2

Acquisition date : 12-JUN-2006 23:24:51

Total number of lines in spectrum	4	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28851-2

Acquisition date : 12-JUN-2006 23:24:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.32	215	500	1.18	133.20	130	7	9.97E-03	40.0	8.05E-01	
1	175.25	100	354	1.33	351.25	348	7	4.62E-03	65.7	2.33E+00	
1	198.38	176	474	0.95	397.53	394	9	8.15E-03	52.6	2.25E+00	
1	596.31	82	194	1.74	1193.80	1189	12	3.78E-03	72.2	1.10E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 4
Number of unidentified lines 4
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.119E+01		1.859E+01	3.097E+01	0.000E+00	0.361
NA-24	-2.209E+00		1.188E+00	Half-Life too short		
K-40	8.035E+00		2.896E+01	4.905E+01	0.000E+00	0.164
CR-51	-3.653E+01		2.152E+01	3.403E+01	0.000E+00	-1.074
MN-54	1.328E+00		1.961E+00	3.343E+00	0.000E+00	0.397
CO-57	-6.868E-01		1.843E+00	2.986E+00	0.000E+00	-0.230
CO-58	-9.974E-01		2.087E+00	3.375E+00	0.000E+00	-0.296
FE-59	5.916E-01		4.220E+00	7.044E+00	0.000E+00	0.084
CO-60	-4.378E-02		1.951E+00	3.181E+00	0.000E+00	-0.014
ZN-65	3.283E+00		3.942E+00	6.826E+00	0.000E+00	0.481
SE-75	-1.044E+00		2.764E+00	4.466E+00	0.000E+00	-0.234
SR-85	2.076E+01		2.671E+00	5.289E+00	0.000E+00	3.924
Y-88	-1.413E+00		2.332E+00	3.686E+00	0.000E+00	-0.383
NB-94	-1.255E-01		1.970E+00	3.206E+00	0.000E+00	-0.039
NB-95	-5.844E-01		2.031E+00	3.328E+00	0.000E+00	-0.176
ZR-95	-1.174E-01		3.627E+00	5.880E+00	0.000E+00	-0.020
MO-99	-2.787E+01		3.435E+02	5.564E+02	0.000E+00	-0.050
RU-103	2.558E+00		2.399E+00	4.055E+00	0.000E+00	0.631
RU-106	-1.337E+00		1.805E+01	2.959E+01	0.000E+00	-0.045
AG-110m	-3.266E-02		1.865E+00	3.054E+00	0.000E+00	-0.011
SN-113	-8.878E-01		2.570E+00	4.181E+00	0.000E+00	-0.212
SB-124	-4.221E+00		2.917E+00	3.728E+00	0.000E+00	-1.132
SB-125	6.717E-01		5.652E+00	9.301E+00	0.000E+00	0.072
TE-129M	1.404E+01		2.808E+01	4.667E+01	0.000E+00	0.301

I-131	3.688E+00	5.627E+00	9.500E+00	0.000E+00	0.388
BA-133	2.110E+00	2.657E+00	4.505E+00	0.000E+00	0.468
CS-134	-1.640E+00	2.158E+00	3.461E+00	0.000E+00	-0.474
CS-136	-1.031E+00	3.440E+00	5.605E+00	0.000E+00	-0.184
CS-137	8.700E-01	2.021E+00	3.376E+00	0.000E+00	0.258
CE-139	1.272E-01	1.928E+00	3.171E+00	0.000E+00	0.040
BA-140	6.818E+00	1.308E+01	2.215E+01	0.000E+00	0.308
LA-140	-1.327E+00	4.264E+00	6.850E+00	0.000E+00	-0.194
CE-141	-6.823E+00	4.211E+00	6.576E+00	0.000E+00	-1.038
CE-144	-1.330E+01	1.521E+01	2.428E+01	0.000E+00	-0.548
EU-152	-1.667E+01	6.086E+00	9.247E+00	0.000E+00	-1.803
EU-154	-1.419E+00	3.769E+00	6.103E+00	0.000E+00	-0.233
RA-226	5.691E-01	4.908E+01	7.915E+01	0.000E+00	0.007
AC-228	-5.452E+00	8.368E+00	1.257E+01	0.000E+00	-0.434
TH-228	5.233E+00	3.885E+00	6.386E+00	0.000E+00	0.819
TH-232	-5.429E+00	8.333E+00	1.252E+01	0.000E+00	-0.434
U-235	-9.411E+00	1.483E+01	2.372E+01	0.000E+00	-0.397
U-238	4.282E+01	2.025E+02	3.344E+02	0.000E+00	0.128
AM-241	-3.597E+01	1.963E+01	2.755E+01	0.000E+00	-1.305

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A,07L28851-2       ,06/13/2006 05:25,05/31/2006 10:40,   3.132E+00,WG L28851-2 EX
B,07L28851-2       ,LIBD                ,06/07/2006 09:32,073L082504
C,BE-7     ,NO ,   1.119E+01,   1.859E+01,   3.097E+01,,    0.361
C,K-40     ,NO ,   8.035E+00,   2.896E+01,   4.905E+01,,    0.164
C,CR-51    ,NO ,  -3.653E+01,   2.152E+01,   3.403E+01,,   -1.074
C,MN-54    ,NO ,   1.328E+00,   1.961E+00,   3.343E+00,,    0.397
C,CO-57    ,NO ,  -6.868E-01,   1.843E+00,   2.986E+00,,   -0.230
C,CO-58    ,NO ,  -9.974E-01,   2.087E+00,   3.375E+00,,   -0.296
C,FE-59    ,NO ,   5.916E-01,   4.220E+00,   7.044E+00,,    0.084
C,CO-60    ,NO ,  -4.378E-02,   1.951E+00,   3.181E+00,,   -0.014
C,ZN-65    ,NO ,   3.283E+00,   3.942E+00,   6.826E+00,,    0.481
C,SE-75    ,NO ,  -1.044E+00,   2.764E+00,   4.466E+00,,   -0.234
C,SR-85    ,NO ,   2.076E+01,   2.671E+00,   5.289E+00,,    3.924
C,Y-88     ,NO ,  -1.413E+00,   2.332E+00,   3.686E+00,,   -0.383
C,NB-94    ,NO ,  -1.255E-01,   1.970E+00,   3.206E+00,,   -0.039
C,NB-95    ,NO ,  -5.844E-01,   2.031E+00,   3.328E+00,,   -0.176
C,ZR-95    ,NO ,  -1.174E-01,   3.627E+00,   5.880E+00,,   -0.020
C,MO-99    ,NO ,  -2.787E+01,   3.435E+02,   5.564E+02,,   -0.050
C,RU-103   ,NO ,   2.558E+00,   2.399E+00,   4.055E+00,,    0.631
C,RU-106   ,NO ,  -1.337E+00,   1.805E+01,   2.959E+01,,   -0.045
C,AG-110m  ,NO ,  -3.266E-02,   1.865E+00,   3.054E+00,,   -0.011
C,SN-113   ,NO ,  -8.878E-01,   2.570E+00,   4.181E+00,,   -0.212
C,SB-124   ,NO ,  -4.221E+00,   2.917E+00,   3.728E+00,,   -1.132
C,SB-125   ,NO ,   6.717E-01,   5.652E+00,   9.301E+00,,    0.072
C,TE-129M  ,NO ,   1.404E+01,   2.808E+01,   4.667E+01,,    0.301
C,I-131    ,NO ,   3.688E+00,   5.627E+00,   9.500E+00,,    0.388
C,BA-133   ,NO ,   2.110E+00,   2.657E+00,   4.505E+00,,    0.468
C,CS-134   ,NO ,  -1.640E+00,   2.158E+00,   3.461E+00,,   -0.474
C,CS-136   ,NO ,  -1.031E+00,   3.440E+00,   5.605E+00,,   -0.184
C,CS-137   ,NO ,   8.700E-01,   2.021E+00,   3.376E+00,,    0.258
C,CE-139   ,NO ,   1.272E-01,   1.928E+00,   3.171E+00,,    0.040
C,BA-140   ,NO ,   6.818E+00,   1.308E+01,   2.215E+01,,    0.308
C,LA-140   ,NO ,  -1.327E+00,   4.264E+00,   6.850E+00,,   -0.194
C,CE-141   ,NO ,  -6.823E+00,   4.211E+00,   6.576E+00,,   -1.038
C,CE-144   ,NO ,  -1.330E+01,   1.521E+01,   2.428E+01,,   -0.548
C,EU-152   ,NO ,  -1.667E+01,   6.086E+00,   9.247E+00,,   -1.803
C,EU-154   ,NO ,  -1.419E+00,   3.769E+00,   6.103E+00,,   -0.233
C,RA-226   ,NO ,   5.691E-01,   4.908E+01,   7.915E+01,,    0.007
C,AC-228   ,NO ,  -5.452E+00,   8.368E+00,   1.257E+01,,   -0.434
C,TH-228   ,NO ,   5.233E+00,   3.885E+00,   6.386E+00,,    0.819
C,TH-232   ,NO ,  -5.429E+00,   8.333E+00,   1.252E+01,,   -0.434
C,U-235    ,NO ,  -9.411E+00,   1.483E+01,   2.372E+01,,   -0.397
C,U-238    ,NO ,   4.282E+01,   2.025E+02,   3.344E+02,,    0.128
C,AM-241   ,NO ,  -3.597E+01,   1.963E+01,   2.755E+01,,   -1.305
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Sec. Review: Analyst: JW LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 07:25:06.52
TBE10 12892256 HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:24:56.75

LIMS No., Customer Name, Client ID: WG L28851-3 EX DRES

Sample ID	: 10L28851-3			Smple Date	: 31-MAY-2006 11:40:00.
Sample Type	: WG			Geometry	: 103L083004
Quantity	: 3.01390E+00 L			BKGFILE	: 10BG060306MT
Start Channel	: 80	Energy Tol	: 1.00000	Real Time	: 0 08:00:04.65
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 08:00:00.00
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.29*	225	975	1.51	131.70	7.26E-01	7.80E-03	27.1	3.72E+00
2	1	140.05	253	744	1.45	279.28	1.91E+00	8.78E-03	19.5	1.97E+00
3	1	185.89*	35	800	1.59	370.99	1.77E+00	1.23E-03	174.6	1.36E+00
4	1	198.60*	210	837	1.49	396.44	1.71E+00	7.30E-03	31.0	1.98E+00
5	1	583.02*	36	156	2.00	1165.71	7.99E-01	1.25E-03	87.4	1.35E+00
6	1	595.63	141	172	2.24	1190.94	7.86E-01	4.90E-03	20.4	3.33E+00
7	1	609.58*	36	148	1.89	1218.85	7.72E-01	1.25E-03	81.7	1.78E+00
8	1	1121.52	51	122	4.96	2243.54	4.78E-01	1.77E-03	51.6	4.18E+00
9	1	1461.35*	15	93	1.91	2923.85	3.88E-01	5.19E-04	193.3	1.89E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	15	10.67*	3.885E-01	1.122E+01	1.122E+01	386.62
RA-226	186.21	35	3.28*	1.770E+00	1.897E+01	1.897E+01	349.12
U-235	143.76	------	10.50*	1.905E+00	------	Line Not Found	------
	163.35	------	4.70	1.860E+00	------	Line Not Found	------
	185.71	35	54.00	1.770E+00	1.152E+00	1.152E+00	349.12
	205.31	------	4.70	1.684E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28851-3

Acquisition date : 12-JUN-2006 23:24:56

Total number of lines in spectrum	9	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	3	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.122E+01	1.122E+01	4.339E+01	386.62	
RA-226	1600.00Y	1.00	1.897E+01	1.897E+01	6.623E+01	349.12	
U-235	7.04E+08Y	1.00	1.152E+00	1.152E+00	4.023E+00	349.12	K
	Total Activity :		3.135E+01	3.135E+01			
	Grand Total Activity :		3.135E+01	3.135E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28851-3 Acquisition date : 12-JUN-2006 23:24:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.29	225	975	1.51	131.70	128	9	7.80E-03	54.3	7.26E-01	
1	140.05	253	744	1.45	279.28	276	8	8.78E-03	39.1	1.91E+00	
1	198.60	210	837	1.49	396.44	391	12	7.30E-03	62.0	1.71E+00	
1	583.02	36	156	2.00	1165.71	1159	13	1.25E-03	****	7.99E-01	T
1	595.63	141	172	2.24	1190.94	1186	12	4.90E-03	40.7	7.86E-01	
1	609.58	36	148	1.89	1218.85	1214	10	1.25E-03	****	7.72E-01	
1	1121.52	51	122	4.96	2243.54	2235	17	1.77E-03	****	4.78E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	3	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.122E+01	1.122E+01	4.339E+01	386.62	
RA-226	1600.00Y	1.00	1.897E+01	1.897E+01	6.623E+01	349.12	
	Total Activity :		3.019E+01	3.019E+01			
	Grand Total Activity :		3.019E+01	3.019E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.122E+01	4.339E+01	3.587E+01	0.000E+00	0.313
RA-226	1.897E+01	6.623E+01	8.887E+01	0.000E+00	0.213

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	8.698E+00		2.175E+01	3.657E+01	0.000E+00	0.238
NA-24	-1.137E+00		1.459E+00	Half-Life too short		

CR-51	-2.397E+01	2.646E+01	4.250E+01	0.000E+00	-0.564
MN-54	3.815E-01	2.184E+00	3.634E+00	0.000E+00	0.105
CO-57	-1.060E-01	2.274E+00	3.759E+00	0.000E+00	-0.028
CO-58	-5.490E-01	2.428E+00	3.971E+00	0.000E+00	-0.138
FE-59	1.494E+00	5.101E+00	8.593E+00	0.000E+00	0.174
CO-60	7.630E-01	2.211E+00	3.709E+00	0.000E+00	0.206
ZN-65	-7.344E-01	5.778E+00	7.966E+00	0.000E+00	-0.092
SE-75	2.367E-01	3.197E+00	5.310E+00	0.000E+00	0.045
SR-85	1.902E+01	2.923E+00	5.626E+00	0.000E+00	3.381
Y-88	-6.488E-01	2.518E+00	4.034E+00	0.000E+00	-0.161
NB-94	1.117E+00	2.116E+00	3.522E+00	0.000E+00	0.317
NB-95	3.759E-01	2.363E+00	3.946E+00	0.000E+00	0.095
ZR-95	-1.884E-01	4.159E+00	6.886E+00	0.000E+00	-0.027
MO-99	-2.474E+01	3.676E+02	6.087E+02	0.000E+00	-0.041
RU-103	7.955E-01	2.805E+00	4.688E+00	0.000E+00	0.170
RU-106	-1.681E+01	2.140E+01	3.340E+01	0.000E+00	-0.503
AG-110m	3.296E-01	2.198E+00	3.612E+00	0.000E+00	0.091
SN-113	-1.665E+00	3.156E+00	5.061E+00	0.000E+00	-0.329
SB-124	-3.733E+00	6.352E+00	4.022E+00	0.000E+00	-0.928
SB-125	-1.763E+00	6.629E+00	1.067E+01	0.000E+00	-0.165
TE-129M	1.236E+01	3.100E+01	5.222E+01	0.000E+00	0.237
I-131	3.480E+00	6.678E+00	1.110E+01	0.000E+00	0.314
BA-133	2.732E+00	3.188E+00	5.348E+00	0.000E+00	0.511
CS-134	-7.660E-01	5.625E+00	3.844E+00	0.000E+00	-0.199
CS-136	-1.275E+00	4.030E+00	6.555E+00	0.000E+00	-0.194
CS-137	4.159E-01	2.385E+00	3.922E+00	0.000E+00	0.106
CE-139	1.200E+00	2.337E+00	3.866E+00	0.000E+00	0.310
BA-140	4.188E+00	1.534E+01	2.555E+01	0.000E+00	0.164
LA-140	5.800E+00	5.070E+00	9.017E+00	0.000E+00	0.643
CE-141	4.707E+00	5.669E+00	8.095E+00	0.000E+00	0.581
CE-144	1.186E+00	2.054E+01	2.882E+01	0.000E+00	0.041
EU-152	-1.158E+01	7.397E+00	1.161E+01	0.000E+00	-0.998
EU-154	2.093E+00	4.623E+00	7.705E+00	0.000E+00	0.272
AC-228	2.972E+00	9.315E+00	1.423E+01	0.000E+00	0.209
TH-228	-1.949E+00	4.679E+00	7.184E+00	0.000E+00	-0.271
TH-232	2.960E+00	9.277E+00	1.417E+01	0.000E+00	0.209
U-235	3.737E+01	2.042E+01	2.989E+01	0.000E+00	1.250
U-238	1.948E+02	2.310E+02	3.950E+02	0.000E+00	0.493
AM-241	-2.865E+01	2.160E+01	2.998E+01	0.000E+00	-0.955

A,10L28851-3 ,06/13/2006 07:25,05/31/2006 11:40, 3.014E+00,WG L28851-3 EX
B,10L28851-3 ,LIBD ,06/07/2006 09:32,103L083004

C,K-40	,YES,	1.122E+01,	4.339E+01,	3.587E+01,,	0.313
C,RA-226	,YES,	1.897E+01,	6.623E+01,	8.887E+01,,	0.213
C,BE-7	,NO ,	8.698E+00,	2.175E+01,	3.657E+01,,	0.238
C,CR-51	,NO ,	-2.397E+01,	2.646E+01,	4.250E+01,,	-0.564
C,MN-54	,NO ,	3.815E-01,	2.184E+00,	3.634E+00,,	0.105
C,CO-57	,NO ,	-1.060E-01,	2.274E+00,	3.759E+00,,	-0.028
C,CO-58	,NO ,	-5.490E-01,	2.428E+00,	3.971E+00,,	-0.138
C,FE-59	,NO ,	1.494E+00,	5.101E+00,	8.593E+00,,	0.174
C,CO-60	,NO ,	7.630E-01,	2.211E+00,	3.709E+00,,	0.206
C,ZN-65	,NO ,	-7.344E-01,	5.778E+00,	7.966E+00,,	-0.092
C,SE-75	,NO ,	2.367E-01,	3.197E+00,	5.310E+00,,	0.045
C,SR-85	,NO ,	1.902E+01,	2.923E+00,	5.626E+00,,	3.381
C,Y-88	,NO ,	-6.488E-01,	2.518E+00,	4.034E+00,,	-0.161
C,NB-94	,NO ,	1.117E+00,	2.116E+00,	3.522E+00,,	0.317
C,NB-95	,NO ,	3.759E-01,	2.363E+00,	3.946E+00,,	0.095
C,ZR-95	,NO ,	-1.884E-01,	4.159E+00,	6.886E+00,,	-0.027
C,MO-99	,NO ,	-2.474E+01,	3.676E+02,	6.087E+02,,	-0.041
C,RU-103	,NO ,	7.955E-01,	2.805E+00,	4.688E+00,,	0.170
C,RU-106	,NO ,	-1.681E+01,	2.140E+01,	3.340E+01,,	-0.503
C,AG-110m	,NO ,	3.296E-01,	2.198E+00,	3.612E+00,,	0.091
C,SN-113	,NO ,	-1.665E+00,	3.156E+00,	5.061E+00,,	-0.329
C,SB-124	,NO ,	-3.733E+00,	6.352E+00,	4.022E+00,,	-0.928
C,SB-125	,NO ,	-1.763E+00,	6.629E+00,	1.067E+01,,	-0.165
C,TE-129M	,NO ,	1.236E+01,	3.100E+01,	5.222E+01,,	0.237
C,I-131	,NO ,	3.480E+00,	6.678E+00,	1.110E+01,,	0.314
C,BA-133	,NO ,	2.732E+00,	3.188E+00,	5.348E+00,,	0.511
C,CS-134	,NO ,	-7.660E-01,	5.625E+00,	3.844E+00,,	-0.199
C,CS-136	,NO ,	-1.275E+00,	4.030E+00,	6.555E+00,,	-0.194
C,CS-137	,NO ,	4.159E-01,	2.385E+00,	3.922E+00,,	0.106
C,CE-139	,NO ,	1.200E+00,	2.337E+00,	3.866E+00,,	0.310
C,BA-140	,NO ,	4.188E+00,	1.534E+01,	2.555E+01,,	0.164
C,LA-140	,NO ,	5.800E+00,	5.070E+00,	9.017E+00,,	0.643
C,CE-141	,NO ,	4.707E+00,	5.669E+00,	8.095E+00,,	0.581
C,CE-144	,NO ,	1.186E+00,	2.054E+01,	2.882E+01,,	0.041
C,EU-152	,NO ,	-1.158E+01,	7.397E+00,	1.161E+01,,	-0.998
C,EU-154	,NO ,	2.093E+00,	4.623E+00,	7.705E+00,,	0.272
C,AC-228	,NO ,	2.972E+00,	9.315E+00,	1.423E+01,,	0.209
C,TH-228	,NO ,	-1.949E+00,	4.679E+00,	7.184E+00,,	-0.271
C,TH-232	,NO ,	2.960E+00,	9.277E+00,	1.417E+01,,	0.209
C,U-235	,NO ,	3.737E+01,	2.042E+01,	2.989E+01,,	1.250
C,U-238	,NO ,	1.948E+02,	2.310E+02,	3.950E+02,,	0.493
C,AM-241	,NO ,	-2.865E+01,	2.160E+01,	2.998E+01,,	-0.955

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 07:25:23.22
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:25:00.29

LIMS No., Customer Name, Client ID: WG L28851-4 EX DRES

Sample ID : 11L28851-4
Sample Type : WG
Quantity : 3.42020E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 13:30:00.
Geometry : 1135L090204
BKGFILE : 11BG060306MT
Real Time : 0 08:00:10.02
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	92.68*	4	701	2.10	184.53	1.28E+00	1.46E-04	*****	
2	0	139.94*	136	779	1.20	279.31	1.69E+00	4.71E-03	42.1	
3	0	185.43*	59	608	1.14	370.54	1.62E+00	2.05E-03	89.8	
4	0	198.44	172	555	1.20	396.63	1.57E+00	5.96E-03	24.9	
5	0	238.47*	0	466	1.02	476.89	1.42E+00	5.92E-07	*****	
6	0	352.21*	33	352	1.52	704.88	1.08E+00	1.16E-03	130.0	
7	0	595.66	57	223	0.84	1192.55	7.15E-01	1.96E-03	52.8	
8	0	609.09*	67	181	1.83	1219.44	7.02E-01	2.33E-03	49.2	
9	0	716.52	76	116	3.79	1434.49	6.19E-01	2.65E-03	32.0	
10	0	911.75*	47	109	1.60	1825.10	5.13E-01	1.63E-03	65.8	
11	0	1460.43*	26	77	1.50	2921.37	3.54E-01	9.17E-04	98.2	
12	0	1761.39	46	33	1.77	3521.76	3.04E-01	1.60E-03	28.3	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	26	10.67*	3.540E-01	1.919E+01	1.919E+01	196.47
RA-226	186.21	59	3.28*	1.617E+00	3.052E+01	3.052E+01	179.57
AC-228	835.50	------	1.75	5.493E-01	------ Line Not Found		------
	911.07	47	27.70*	5.133E-01	9.057E+00	9.095E+00	131.69
TH-228	238.63	0	44.60*	1.422E+00	7.382E-04	7.474E-04	5646 92.25
	240.98	------	3.95	1.413E+00	------ Line Not Found		------
U-235	143.76	------	10.50*	1.695E+00	------ Line Not Found		------
	163.35	------	4.70	1.678E+00	------ Line Not Found		------
	185.71	59	54.00	1.617E+00	1.854E+00	1.854E+00	179.57
	205.31	------	4.70	1.546E+00	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28851-4

Acquisition date : 12-JUN-2006 23:25:00

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.919E+01	1.919E+01	3.770E+01	196.47	
RA-226	1600.00Y	1.00	3.052E+01	3.052E+01	5.480E+01	179.57	
AC-228	5.75Y	1.00	9.057E+00	9.095E+00	11.98E+00	131.69	
TH-228	1.91Y	1.01	7.382E-04	7.474E-04	**********564692.25		
U-235	7.04E+08Y	1.00	1.854E+00	1.854E+00	3.329E+00	179.57	K
			---------	---------			
	Total Activity :		6.062E+01	6.065E+01			

Grand Total Activity : 6.062E+01 6.065E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28851-4 Acquisition date : 12-JUN-2006 23:25:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.68	4	701	2.10	184.53	181	8	1.46E-04	****	1.28E+00	
0	139.94	136	779	1.20	279.31	275	9	4.71E-03	84.3	1.69E+00	
0	198.44	172	555	1.20	396.63	393	8	5.96E-03	49.8	1.57E+00	
0	352.21	33	352	1.52	704.88	698	11	1.16E-03	****	1.08E+00	
0	595.66	57	223	0.84	1192.55	1187	11	1.96E-03	****	7.15E-01	
0	609.09	67	181	1.83	1219.44	1212	12	2.33E-03	98.3	7.02E-01	
0	716.52	76	116	3.79	1434.49	1427	14	2.65E-03	63.9	6.19E-01	
0	1761.39	46	33	1.77	3521.76	3516	11	1.60E-03	56.6	3.04E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.919E+01	1.919E+01	3.770E+01	196.47	
RA-226	1600.00Y	1.00	3.052E+01	3.052E+01	5.480E+01	179.57	
AC-228	5.75Y	1.00	9.057E+00	9.095E+00	11.98E+00	131.69	
TH-228	1.91Y	1.01	7.382E-04	7.474E-04	**********	564692.25	
			---------	---------			
	Total Activity :		5.876E+01	5.880E+01			

Grand Total Activity : 5.876E+01 5.880E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.919E+01	3.770E+01	3.124E+01	0.000E+00	0.614
RA-226	3.052E+01	5.480E+01	8.322E+01	0.000E+00	0.367
AC-228	9.095E+00	1.198E+01	1.241E+01	0.000E+00	0.733
TH-228	7.474E-04	4.221E+00	6.342E+00	0.000E+00	0.000

---- Non-Identified Nuclides ----

Nuclide	Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.228E+00		2.135E+01	3.476E+01	0.000E+00	-0.035
NA-24	5.063E-02		1.271E+00	Half-Life too short		
CR-51	-1.916E+01		2.397E+01	3.880E+01	0.000E+00	-0.494
MN-54	-3.029E-01		2.115E+00	3.438E+00	0.000E+00	-0.088
CO-57	-7.052E-01		2.148E+00	3.519E+00	0.000E+00	-0.200
CO-58	-8.803E-01		2.338E+00	3.764E+00	0.000E+00	-0.234
FE-59	4.289E+00		4.761E+00	8.259E+00	0.000E+00	0.519
CO-60	6.497E-01		2.158E+00	3.609E+00	0.000E+00	0.180
ZN-65	1.100E+00		4.644E+00	7.780E+00	0.000E+00	0.141
SE-75	9.460E-02		2.957E+00	4.924E+00	0.000E+00	0.019
SR-85	1.896E+01		2.819E+00	5.411E+00	0.000E+00	3.503
Y-88	-1.090E+00		2.694E+00	4.301E+00	0.000E+00	-0.253
NB-94	-4.538E-01		2.087E+00	3.367E+00	0.000E+00	-0.135
NB-95	2.856E+00		2.352E+00	4.075E+00	0.000E+00	0.701
ZR-95	1.138E-01		4.217E+00	6.944E+00	0.000E+00	0.016
MO-99	-1.721E+02		3.699E+02	5.960E+02	0.000E+00	-0.289
RU-103	4.514E+00		2.734E+00	4.708E+00	0.000E+00	0.959
RU-106	-1.660E+01		2.036E+01	3.265E+01	0.000E+00	-0.508
AG-110m	7.010E-01		2.168E+00	3.634E+00	0.000E+00	0.193
SN-113	5.505E-01		2.954E+00	4.883E+00	0.000E+00	0.113
SB-124	-5.411E+00		6.326E+00	3.941E+00	0.000E+00	-1.373
SB-125	-1.846E-01		6.243E+00	1.022E+01	0.000E+00	-0.018
TE-129M	-4.894E+00		3.111E+01	5.056E+01	0.000E+00	-0.097
I-131	3.150E-02		6.327E+00	1.043E+01	0.000E+00	0.003
BA-133	1.857E+00		3.488E+00	4.977E+00	0.000E+00	0.373
CS-134	1.785E+00		3.820E+00	3.856E+00	0.000E+00	0.463
CS-136	-3.127E-01		3.816E+00	6.229E+00	0.000E+00	-0.050
CS-137	1.630E+00		2.330E+00	3.963E+00	0.000E+00	0.411
CE-139	3.762E-01		2.244E+00	3.685E+00	0.000E+00	0.102
BA-140	5.834E+00		1.482E+01	2.445E+01	0.000E+00	0.239
LA-140	4.208E-01		4.722E+00	7.886E+00	0.000E+00	0.053
CE-141	-6.741E-01		5.382E+00	7.469E+00	0.000E+00	-0.090
CE-144	1.403E+01		1.967E+01	2.802E+01	0.000E+00	0.501
EU-152	-1.308E+01		8.388E+00	1.096E+01	0.000E+00	-1.194
EU-154	5.661E-01		4.401E+00	7.272E+00	0.000E+00	0.078
TH-232	9.057E+00	+	1.193E+01	1.478E+01	0.000E+00	0.613
U-235	2.881E+01		1.907E+01	2.770E+01	0.000E+00	1.040
U-238	1.659E+02		2.201E+02	3.807E+02	0.000E+00	0.436
AM-241	-8.490E+01		2.868E+01	4.438E+01	0.000E+00	-1.913

A,11L28851-4 ,06/13/2006 07:25,05/31/2006 13:30, 3.420E+00,WG L28851-4 EX
B,11L28851-4 ,LIBD ,06/07/2006 09:40,1135L090204

C,K-40	,YES,	1.919E+01,	3.770E+01,	3.124E+01,,	0.614
C,RA-226	,YES,	3.052E+01,	5.480E+01,	8.322E+01,,	0.367
C,AC-228	,YES,	9.095E+00,	1.198E+01,	1.241E+01,,	0.733
C,TH-228	,YES,	7.474E-04,	4.221E+00,	6.342E+00,,	0.000
C,BE-7	,NO ,	-1.228E+00,	2.135E+01,	3.476E+01,,	-0.035
C,CR-51	,NO ,	-1.916E+01,	2.397E+01,	3.880E+01,,	-0.494
C,MN-54	,NO ,	-3.029E-01,	2.115E+00,	3.438E+00,,	-0.088
C,CO-57	,NO ,	-7.052E-01,	2.148E+00,	3.519E+00,,	-0.200
C,CO-58	,NO ,	-8.803E-01,	2.338E+00,	3.764E+00,,	-0.234
C,FE-59	,NO ,	4.289E+00,	4.761E+00,	8.259E+00,,	0.519
C,CO-60	,NO ,	6.497E-01,	2.158E+00,	3.609E+00,,	0.180
C,ZN-65	,NO ,	1.100E+00,	4.644E+00,	7.780E+00,,	0.141
C,SE-75	,NO ,	9.460E-02,	2.957E+00,	4.924E+00,,	0.019
C,SR-85	,NO ,	1.896E+01,	2.819E+00,	5.411E+00,,	3.503
C,Y-88	,NO ,	-1.090E+00,	2.694E+00,	4.301E+00,,	-0.253
C,NB-94	,NO ,	-4.538E-01,	2.087E+00,	3.367E+00,,	-0.135
C,NB-95	,NO ,	2.856E+00,	2.352E+00,	4.075E+00,,	0.701
C,ZR-95	,NO ,	1.138E-01,	4.217E+00,	6.944E+00,,	0.016
C,MO-99	,NO ,	-1.721E+02,	3.699E+02,	5.960E+02,,	-0.289
C,RU-103	,NO ,	4.514E+00,	2.734E+00,	4.708E+00,,	0.959
C,RU-106	,NO ,	-1.660E+01,	2.036E+01,	3.265E+01,,	-0.508
C,AG-110m	,NO ,	7.010E-01,	2.168E+00,	3.634E+00,,	0.193
C,SN-113	,NO ,	5.505E-01,	2.954E+00,	4.883E+00,,	0.113
C,SB-124	,NO ,	-5.411E+00,	6.326E+00,	3.941E+00,,	-1.373
C,SB-125	,NO ,	-1.846E-01,	6.243E+00,	1.022E+01,,	-0.018
C,TE-129M	,NO ,	-4.894E+00,	3.111E+01,	5.056E+01,,	-0.097
C,I-131	,NO ,	3.150E-02,	6.327E+00,	1.043E+01,,	0.003
C,BA-133	,NO ,	1.857E+00,	3.488E+00,	4.977E+00,,	0.373
C,CS-134	,NO ,	1.785E+00,	3.820E+00,	3.856E+00,,	0.463
C,CS-136	,NO ,	-3.127E-01,	3.816E+00,	6.229E+00,,	-0.050
C,CS-137	,NO ,	1.630E+00,	2.330E+00,	3.963E+00,,	0.411
C,CE-139	,NO ,	3.762E-01,	2.244E+00,	3.685E+00,,	0.102
C,BA-140	,NO ,	5.834E+00,	1.482E+01,	2.445E+01,,	0.239
C,LA-140	,NO ,	4.208E-01,	4.722E+00,	7.886E+00,,	0.053
C,CE-141	,NO ,	-6.741E-01,	5.382E+00,	7.469E+00,,	-0.090
C,CE-144	,NO ,	1.403E+01,	1.967E+01,	2.802E+01,,	0.501
C,EU-152	,NO ,	-1.308E+01,	8.388E+00,	1.096E+01,,	-1.194
C,EU-154	,NO ,	5.661E-01,	4.401E+00,	7.272E+00,,	0.078
C,TH-232	,NO ,	9.057E+00,	1.193E+01,	1.478E+01,,	0.613
C,U-235	,NO ,	2.881E+01,	1.907E+01,	2.770E+01,,	1.040
C,U-238	,NO ,	1.659E+02,	2.201E+02,	3.807E+02,,	0.436
C,AM-241	,NO ,	-8.490E+01,	2.868E+01,	4.438E+01,,	-1.913

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 05:25:32.28
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:25:06.88

LIMS No., Customer Name, Client ID: WG L28851-5 EX DRES

Sample ID : 13L28851-5
Sample Type : WG
Quantity : 3.19060E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 14:30:00.
Geometry : 133L082404
BKGFILE : 13BG060306MT
Real Time : 0 06:00:05.98
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	46.07*	78	533	2.67	92.26	1.49E-01	3.61E-03	60.0	3.02E+00
2	1	66.41	175	651	1.31	132.92	8.31E-01	8.09E-03	25.3	2.95E+00
3	1	139.74*	113	570	0.94	279.48	2.27E+00	5.22E-03	39.9	1.76E+00
4	1	185.77*	20	700	1.04	371.48	2.18E+00	9.24E-04	281.4	1.10E+00
5	1	198.57*	160	464	1.68	397.06	2.12E+00	7.39E-03	28.2	2.56E+00
6	1	583.12*	0	128	1.82	1165.92	1.04E+00	1.47E-05	*****	3.65E+00
7	2	595.86	136	125	1.79	1191.38	1.02E+00	6.28E-03	18.4	3.16E+00
8	2	599.67	62	101	1.48	1199.00	1.02E+00	2.88E-03	31.4	
9	1	609.43*	51	164	2.24	1218.52	1.01E+00	2.36E-03	65.2	9.03E-01
10	1	1461.61*	7	80	2.70	2923.62	5.14E-01	3.02E-04	437.6	1.90E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	7	10.67*	5.142E-01	4.666E+00	4.666E+00	875.13
RA-226	186.21	20	3.28*	2.179E+00	1.095E+01	1.095E+01	562.80
U-235	143.76	------	10.50*	2.278E+00	------	Line Not Found	------
	163.35	------	4.70	2.256E+00	------	Line Not Found	------
	185.71	20	54.00	2.179E+00	6.651E-01	6.651E-01	562.80
	205.31	------	4.70	2.093E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28851-5 Acquisition date : 12-JUN-2006 23:25:06

Total number of lines in spectrum	10	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	4	40.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.666E+00	4.666E+00	40.83E+00	875.13	
RA-226	1600.00Y	1.00	1.095E+01	1.095E+01	6.163E+01	562.80	
U-235	7.04E+08Y	1.00	6.651E-01	6.651E-01	37.43E-01	562.80	K
	Total Activity :		1.628E+01	1.628E+01			
	Grand Total Activity :		1.628E+01	1.628E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 13L28851-5 Acquisition date : 12-JUN-2006 23:25:06

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	46.07	78	533	2.67	92.26	89	9	3.61E-03	****	1.49E-01	
1	66.41	175	651	1.31	132.92	130	7	8.09E-03	50.7	8.31E-01	
1	139.74	113	570	0.94	279.48	276	7	5.22E-03	79.8	2.27E+00	
1	198.57	160	464	1.68	397.06	393	9	7.39E-03	56.4	2.12E+00	
1	583.12	0	128	1.82	1165.92	1162	9	1.47E-05	****	1.04E+00	T
2	595.86	136	125	1.79	1191.38	1185	25	6.28E-03	36.8	1.02E+00	
2	599.67	62	101	1.48	1199.00	1185	25	2.88E-03	62.8	1.02E+00	T
1	609.43	51	164	2.24	1218.52	1211	14	2.36E-03	****	1.01E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	4	40.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.666E+00	4.666E+00	40.83E+00	875.13	
RA-226	1600.00Y	1.00	1.095E+01	1.095E+01	6.163E+01	562.80	
	Total Activity :		1.562E+01	1.562E+01			
	Grand Total Activity :		1.562E+01	1.562E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.666E+00	4.083E+01	3.209E+01	0.000E+00	0.145
RA-226	1.095E+01	6.163E+01	7.562E+01	0.000E+00	0.145

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.721E+01		1.921E+01	3.243E+01	0.000E+00	0.531

NA-24	-3.833E-01	1.167E+00	Half-Life too short		
CR-51	-1.254E+01	2.215E+01	3.539E+01	0.000E+00	-0.355
MN-54	1.227E+00	2.102E+00	3.558E+00	0.000E+00	0.345
CO-57	2.014E-01	1.823E+00	3.048E+00	0.000E+00	0.066
CO-58	1.575E+00	2.198E+00	3.755E+00	0.000E+00	0.419
FE-59	4.993E+00	4.800E+00	8.340E+00	0.000E+00	0.599
CO-60	-1.255E+00	2.205E+00	3.509E+00	0.000E+00	-0.358
ZN-65	-9.860E-01	4.433E+00	7.191E+00	0.000E+00	-0.137
SE-75	-7.189E-01	2.712E+00	4.440E+00	0.000E+00	-0.162
SR-85	1.656E+01	2.775E+00	5.245E+00	0.000E+00	3.157
Y-88	-2.886E-01	2.527E+00	4.095E+00	0.000E+00	-0.070
NB-94	-6.187E-01	1.985E+00	3.186E+00	0.000E+00	-0.194
NB-95	1.747E+00	2.104E+00	3.629E+00	0.000E+00	0.481
ZR-95	-4.158E-01	3.915E+00	6.469E+00	0.000E+00	-0.064
MO-99	2.026E+02	3.542E+02	6.042E+02	0.000E+00	0.335
RU-103	1.017E+00	2.542E+00	4.197E+00	0.000E+00	0.242
RU-106	-1.853E-01	1.844E+01	3.031E+01	0.000E+00	-0.006
AG-110m	2.931E-02	2.072E+00	3.394E+00	0.000E+00	0.009
SN-113	1.029E+00	2.619E+00	4.399E+00	0.000E+00	0.234
SB-124	2.351E+00	4.576E+00	3.678E+00	0.000E+00	0.639
SB-125	-1.623E+00	5.789E+00	9.433E+00	0.000E+00	-0.172
TE-129M	2.760E+00	2.838E+01	4.662E+01	0.000E+00	0.059
I-131	5.726E-01	5.609E+00	9.375E+00	0.000E+00	0.061
BA-133	-1.677E+00	2.671E+00	4.371E+00	0.000E+00	-0.384
CS-134	3.430E+00	4.061E+00	3.418E+00	0.000E+00	1.004
CS-136	-3.545E+00	3.700E+00	5.801E+00	0.000E+00	-0.611
CS-137	2.389E+00	2.400E+00	3.875E+00	0.000E+00	0.616
CE-139	4.134E-01	1.915E+00	3.153E+00	0.000E+00	0.131
BA-140	4.873E+00	1.347E+01	2.273E+01	0.000E+00	0.214
LA-140	3.514E+00	4.349E+00	7.628E+00	0.000E+00	0.461
CE-141	3.041E+00	4.336E+00	6.549E+00	0.000E+00	0.464
CE-144	-1.568E+01	1.559E+01	2.245E+01	0.000E+00	-0.698
EU-152	-1.064E+01	6.401E+00	9.787E+00	0.000E+00	-1.087
EU-154	2.233E+00	3.737E+00	6.313E+00	0.000E+00	0.354
AC-228	1.178E+00	9.330E+00	1.414E+01	0.000E+00	0.083
TH-228	1.552E+00	4.110E+00	6.561E+00	0.000E+00	0.237
TH-232	1.174E+00	9.292E+00	1.408E+01	0.000E+00	0.083
U-235	-1.357E+00	1.717E+01	2.346E+01	0.000E+00	-0.058
U-238	-2.637E+01	2.479E+02	3.796E+02	0.000E+00	-0.069
AM-241	-2.544E+01	1.646E+01	2.627E+01	0.000E+00	-0.968

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A,13L28851-5       ,06/13/2006 05:25,05/31/2006 14:30,   3.191E+00,WG L28851-5 EX
B,13L28851-5       ,LIBD                ,08/05/2005 08:16,133L082404
C,K-40     ,YES,    4.666E+00,   4.083E+01,   3.209E+01,,    0.145
C,RA-226   ,YES,    1.095E+01,   6.163E+01,   7.562E+01,,    0.145
C,BE-7     ,NO ,    1.721E+01,   1.921E+01,   3.243E+01,,    0.531
C,CR-51    ,NO ,   -1.254E+01,   2.215E+01,   3.539E+01,,   -0.355
C,MN-54    ,NO ,    1.227E+00,   2.102E+00,   3.558E+00,,    0.345
C,CO-57    ,NO ,    2.014E-01,   1.823E+00,   3.048E+00,,    0.066
C,CO-58    ,NO ,    1.575E+00,   2.198E+00,   3.755E+00,,    0.419
C,FE-59    ,NO ,    4.993E+00,   4.800E+00,   8.340E+00,,    0.599
C,CO-60    ,NO ,   -1.255E+00,   2.205E+00,   3.509E+00,,   -0.358
C,ZN-65    ,NO ,   -9.860E-01,   4.433E+00,   7.191E+00,,   -0.137
C,SE-75    ,NO ,   -7.189E-01,   2.712E+00,   4.440E+00,,   -0.162
C,SR-85    ,NO ,    1.656E+01,   2.775E+00,   5.245E+00,,    3.157
C,Y-88     ,NO ,   -2.886E-01,   2.527E+00,   4.095E+00,,   -0.070
C,NB-94    ,NO ,   -6.187E-01,   1.985E+00,   3.186E+00,,   -0.194
C,NB-95    ,NO ,    1.747E+00,   2.104E+00,   3.629E+00,,    0.481
C,ZR-95    ,NO ,   -4.158E-01,   3.915E+00,   6.469E+00,,   -0.064
C,MO-99    ,NO ,    2.026E+02,   3.542E+02,   6.042E+02,,    0.335
C,RU-103   ,NO ,    1.017E+00,   2.542E+00,   4.197E+00,,    0.242
C,RU-106   ,NO ,   -1.853E-01,   1.844E+01,   3.031E+01,,   -0.006
C,AG-110m  ,NO ,    2.931E-02,   2.072E+00,   3.394E+00,,    0.009
C,SN-113   ,NO ,    1.029E+00,   2.619E+00,   4.399E+00,,    0.234
C,SB-124   ,NO ,    2.351E+00,   4.576E+00,   3.678E+00,,    0.639
C,SB-125   ,NO ,   -1.623E+00,   5.789E+00,   9.433E+00,,   -0.172
C,TE-129M  ,NO ,    2.760E+00,   2.838E+01,   4.662E+01,,    0.059
C,I-131    ,NO ,    5.726E-01,   5.609E+00,   9.375E+00,,    0.061
C,BA-133   ,NO ,   -1.677E+00,   2.671E+00,   4.371E+00,,   -0.384
C,CS-134   ,NO ,    3.430E+00,   4.061E+00,   3.418E+00,,    1.004
C,CS-136   ,NO ,   -3.545E+00,   3.700E+00,   5.801E+00,,   -0.611
C,CS-137   ,NO ,    2.389E+00,   2.400E+00,   3.875E+00,,    0.616
C,CE-139   ,NO ,    4.134E-01,   1.915E+00,   3.153E+00,,    0.131
C,BA-140   ,NO ,    4.873E+00,   1.347E+01,   2.273E+01,,    0.214
C,LA-140   ,NO ,    3.514E+00,   4.349E+00,   7.628E+00,,    0.461
C,CE-141   ,NO ,    3.041E+00,   4.336E+00,   6.549E+00,,    0.464
C,CE-144   ,NO ,   -1.568E+01,   1.559E+01,   2.245E+01,,   -0.698
C,EU-152   ,NO ,   -1.064E+01,   6.401E+00,   9.787E+00,,   -1.087
C,EU-154   ,NO ,    2.233E+00,   3.737E+00,   6.313E+00,,    0.354
C,AC-228   ,NO ,    1.178E+00,   9.330E+00,   1.414E+01,,    0.083
C,TH-228   ,NO ,    1.552E+00,   4.110E+00,   6.561E+00,,    0.237
C,TH-232   ,NO ,    1.174E+00,   9.292E+00,   1.408E+01,,    0.083
C,U-235    ,NO ,   -1.357E+00,   1.717E+01,   2.346E+01,,   -0.058
C,U-238    ,NO ,   -2.637E+01,   2.479E+02,   3.796E+02,,   -0.069
C,AM-241   ,NO ,   -2.544E+01,   1.646E+01,   2.627E+01,,   -0.968
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 07:25:22.98
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:25:11.02

LIMS No., Customer Name, Client ID: WG L28851-6 EX DRES

Sample ID : 14L28851-6
Sample Type : WG
Quantity : 3.09010E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 15:20:00.
Geometry : 143L082304
BKGFILE : 14BG060306MT
Real Time : 0 08:00:04.56
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.24	291	1017	1.67	133.46	5.09E-01	1.01E-02	20.6	5.37E-01
2	1	92.77*	56	816	1.49	186.66	1.28E+00	1.94E-03	102.5	1.81E+00
3	1	140.11	253	857	1.56	281.58	1.90E+00	8.77E-03	21.7	1.37E+00
4	1	186.01*	30	747	1.89	373.58	1.88E+00	1.03E-03	199.0	8.27E-01
5	1	198.90*	194	913	2.98	399.41	1.83E+00	6.75E-03	35.0	2.20E+00
6	1	583.04*	35	203	3.64	1167.88	8.62E-01	1.22E-03	103.1	1.31E+00
7	1	596.09	78	196	1.82	1193.97	8.48E-01	2.73E-03	35.5	1.37E+00
8	1	609.04*	55	220	2.60	1219.82	8.34E-01	1.91E-03	70.1	1.29E+00
9	1	911.11*	27	152	3.16	1822.34	6.16E-01	9.35E-04	117.7	1.00E+00
10	1	1120.87*	35	72	2.83	2239.88	5.30E-01	1.20E-03	67.9	1.34E+00
11	1	1238.24	52	62	3.42	2473.19	4.93E-01	1.82E-03	35.3	1.84E+00
12	1	1461.22*	42	61	2.71	2915.88	4.36E-01	1.47E-03	69.9	1.22E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	42	10.67*	4.362E-01	2.768E+01	2.768E+01	139.88
RA-226	186.21	30	3.28*	1.876E+00	1.468E+01	1.468E+01	398.03
AC-228	835.50	------	1.75	6.571E-01	------	Line Not Found	------
	911.07	27	27.70*	6.165E-01	4.790E+00	4.810E+00	235.47
TH-232	583.14	35	30.25	8.622E-01	4.084E+00	4.084E+00	206.30
	911.07	27	27.70*	6.165E-01	4.790E+00	4.790E+00	235.47
	969.11	------	16.60	5.892E-01	------	Line Not Found	------
U-235	143.76	------	10.50*	1.907E+00	------	Line Not Found	------
	163.35	------	4.70	1.923E+00	------	Line Not Found	------
	185.71	30	54.00	1.876E+00	8.914E-01	8.914E-01	398.03
	205.31	------	4.70	1.809E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 14L28851-6

Acquisition date : 12-JUN-2006 23:25:11

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.768E+01	2.768E+01	3.872E+01	139.88	
RA-226	1600.00Y	1.00	1.468E+01	1.468E+01	5.842E+01	398.03	
AC-228	5.75Y	1.00	4.790E+00	4.810E+00	11.33E+00	235.47	
TH-232	1.41E+10Y	1.00	4.790E+00	4.790E+00	11.28E+00	235.47	
U-235	7.04E+08Y	1.00	8.914E-01	8.914E-01	35.48E-01	398.03	K
	Total Activity :		5.283E+01	5.285E+01			
	Grand Total Activity :		5.283E+01	5.285E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L28851-6

Acquisition date : 12-JUN-2006 23:25:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.24	291	1017	1.67	133.46	129	9	1.01E-02	41.3	5.09E-01	
1	92.77	56	816	1.49	186.66	183	8	1.94E-03	****	1.28E+00	
1	140.11	253	857	1.56	281.58	277	9	8.77E-03	43.4	1.90E+00	
1	198.90	194	913	2.98	399.41	393	13	6.75E-03	70.0	1.83E+00	
1	596.09	78	196	1.82	1193.97	1190	10	2.73E-03	71.0	8.48E-01	
1	609.04	55	220	2.60	1219.82	1213	14	1.91E-03	****	8.34E-01	
1	1120.87	35	72	2.83	2239.88	2234	13	1.20E-03	****	5.30E-01	
1	1238.24	52	62	3.42	2473.19	2467	13	1.82E-03	70.5	4.93E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.768E+01	2.768E+01	3.872E+01	139.88	
RA-226	1600.00Y	1.00	1.468E+01	1.468E+01	5.842E+01	398.03	
AC-228	5.75Y	1.00	7.062E-01	7.091E-01	141.4E-01	1993.62	
TH-232	1.41E+10Y	1.00	4.084E+00	4.084E+00	8.425E+00	206.30	
	Total Activity :		4.715E+01	4.715E+01			

Grand Total Activity : 4.715E+01 4.715E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.768E+01	3.872E+01	3.315E+01	0.000E+00	0.835
RA-226	1.468E+01	5.842E+01	8.241E+01	0.000E+00	0.178
AC-228	7.091E-01	1.414E+01	1.300E+01	0.000E+00	0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.767E+01		2.176E+01	3.494E+01	0.000E+00	-0.506
NA-24	-1.080E+00		1.241E+00	Half-Life too short		
CR-51	-1.287E+01		2.485E+01	4.021E+01	0.000E+00	-0.320
MN-54	1.921E+00		2.365E+00	3.984E+00	0.000E+00	0.482
CO-57	1.337E+00		2.243E+00	3.761E+00	0.000E+00	0.355
CO-58	-1.856E+00		2.367E+00	3.730E+00	0.000E+00	-0.498
FE-59	1.527E+00		5.016E+00	8.329E+00	0.000E+00	0.183
CO-60	3.116E-01		2.345E+00	3.889E+00	0.000E+00	0.080
ZN-65	7.271E+00		5.881E+00	8.758E+00	0.000E+00	0.830
SE-75	-7.633E-01		2.989E+00	4.916E+00	0.000E+00	-0.155
SR-85	2.189E+01		2.923E+00	5.634E+00	0.000E+00	3.886
Y-88	-1.997E+00		2.591E+00	4.006E+00	0.000E+00	-0.499
NB-94	-4.464E-01		2.223E+00	3.639E+00	0.000E+00	-0.123
NB-95	1.248E+00		2.494E+00	4.172E+00	0.000E+00	0.299
ZR-95	-3.684E+00		4.402E+00	6.975E+00	0.000E+00	-0.528
MO-99	-7.057E+00		3.745E+02	6.151E+02	0.000E+00	-0.011
RU-103	4.761E-01		2.893E+00	4.779E+00	0.000E+00	0.100
RU-106	-7.333E+00		2.186E+01	3.452E+01	0.000E+00	-0.212
AG-110m	8.204E-01		2.264E+00	3.798E+00	0.000E+00	0.216
SN-113	-1.442E+00		3.147E+00	5.037E+00	0.000E+00	-0.286
SB-124	-1.554E+00		6.033E+00	3.981E+00	0.000E+00	-0.390
SB-125	-4.569E-01		6.411E+00	1.060E+01	0.000E+00	-0.043
TE-129M	1.526E+00		3.220E+01	5.323E+01	0.000E+00	0.029
I-131	-1.004E+00		6.527E+00	1.058E+01	0.000E+00	-0.095
BA-133	4.901E+00		3.116E+00	5.287E+00	0.000E+00	0.927
CS-134	1.594E+00		5.359E+00	3.835E+00	0.000E+00	0.416
CS-136	5.005E-01		3.958E+00	6.501E+00	0.000E+00	0.077
CS-137	1.781E+00		2.407E+00	4.092E+00	0.000E+00	0.435
CE-139	-2.123E-01		2.233E+00	3.656E+00	0.000E+00	-0.058
BA-140	-1.036E+01		1.508E+01	2.408E+01	0.000E+00	-0.430
LA-140	1.827E+00		4.619E+00	7.838E+00	0.000E+00	0.233
CE-141	1.520E+00		5.440E+00	7.675E+00	0.000E+00	0.198
CE-144	-7.120E+00		2.002E+01	2.788E+01	0.000E+00	-0.255
EU-152	-1.551E+01		7.135E+00	1.099E+01	0.000E+00	-1.411
EU-154	7.917E-01		4.593E+00	7.643E+00	0.000E+00	0.104
TH-228	4.887E+00		4.437E+00	7.024E+00	0.000E+00	0.696
U-235	2.639E+01		1.952E+01	2.833E+01	0.000E+00	0.931
U-238	-2.147E+01		2.412E+02	3.955E+02	0.000E+00	-0.054
AM-241	-3.217E+01		3.452E+01	4.714E+01	0.000E+00	-0.683

A,14L28851-6 ,06/13/2006 07:25,05/31/2006 15:20, 3.090E+00,WG L28851-6 EX
B,14L28851-6 ,LIBD ,06/02/2006 08:23,143L082304

C,K-40	,YES,	2.768E+01,	3.872E+01,	3.315E+01,,	0.835
C,RA-226	,YES,	1.468E+01,	5.842E+01,	8.241E+01,,	0.178
C,AC-228	,YES,	7.091E-01,	1.414E+01,	1.300E+01,,	0.055
C,TH-232	,YES,	4.084E+00,	8.425E+00,	1.443E+01,,	0.283
C,BE-7	,NO ,	-1.767E+01,	2.176E+01,	3.494E+01,,	-0.506
C,CR-51	,NO ,	-1.287E+01,	2.485E+01,	4.021E+01,,	-0.320
C,MN-54	,NO ,	1.921E+00,	2.365E+00,	3.984E+00,,	0.482
C,CO-57	,NO ,	1.337E+00,	2.243E+00,	3.761E+00,,	0.355
C,CO-58	,NO ,	-1.856E+00,	2.367E+00,	3.730E+00,,	-0.498
C,FE-59	,NO ,	1.527E+00,	5.016E+00,	8.329E+00,,	0.183
C,CO-60	,NO ,	3.116E-01,	2.345E+00,	3.889E+00,,	0.080
C,ZN-65	,NO ,	7.271E+00,	5.881E+00,	8.758E+00,,	0.830
C,SE-75	,NO ,	-7.633E-01,	2.989E+00,	4.916E+00,,	-0.155
C,SR-85	,NO ,	2.189E+01,	2.923E+00,	5.634E+00,,	3.886
C,Y-88	,NO ,	-1.997E+00,	2.591E+00,	4.006E+00,,	-0.499
C,NB-94	,NO ,	-4.464E-01,	2.223E+00,	3.639E+00,,	-0.123
C,NB-95	,NO ,	1.248E+00,	2.494E+00,	4.172E+00,,	0.299
C,ZR-95	,NO ,	-3.684E+00,	4.402E+00,	6.975E+00,,	-0.528
C,MO-99	,NO ,	-7.057E+00,	3.745E+02,	6.151E+02,,	-0.011
C,RU-103	,NO ,	4.761E-01,	2.893E+00,	4.779E+00,,	0.100
C,RU-106	,NO ,	-7.333E+00,	2.186E+01,	3.452E+01,,	-0.212
C,AG-110m	,NO ,	8.204E-01,	2.264E+00,	3.798E+00,,	0.216
C,SN-113	,NO ,	-1.442E+00,	3.147E+00,	5.037E+00,,	-0.286
C,SB-124	,NO ,	-1.554E+00,	6.033E+00,	3.981E+00,,	-0.390
C,SB-125	,NO ,	-4.569E-01,	6.411E+00,	1.060E+01,,	-0.043
C,TE-129M	,NO ,	1.526E+00,	3.220E+01,	5.323E+01,,	0.029
C,I-131	,NO ,	-1.004E+00,	6.527E+00,	1.058E+01,,	-0.095
C,BA-133	,NO ,	4.901E+00,	3.116E+00,	5.287E+00,,	0.927
C,CS-134	,NO ,	1.594E+00,	5.359E+00,	3.835E+00,,	0.416
C,CS-136	,NO ,	5.005E-01,	3.958E+00,	6.501E+00,,	0.077
C,CS-137	,NO ,	1.781E+00,	2.407E+00,	4.092E+00,,	0.435
C,CE-139	,NO ,	-2.123E-01,	2.233E+00,	3.656E+00,,	-0.058
C,BA-140	,NO ,	-1.036E+01,	1.508E+01,	2.408E+01,,	-0.430
C,LA-140	,NO ,	1.827E+00,	4.619E+00,	7.838E+00,,	0.233
C,CE-141	,NO ,	1.520E+00,	5.440E+00,	7.675E+00,,	0.198
C,CE-144	,NO ,	-7.120E+00,	2.002E+01,	2.788E+01,,	-0.255
C,EU-152	,NO ,	-1.551E+01,	7.135E+00,	1.099E+01,,	-1.411
C,EU-154	,NO ,	7.917E-01,	4.593E+00,	7.643E+00,,	0.104
C,TH-228	,NO ,	4.887E+00,	4.437E+00,	7.024E+00,,	0.696
C,U-235	,NO ,	2.639E+01,	1.952E+01,	2.833E+01,,	0.931
C,U-238	,NO ,	-2.147E+01,	2.412E+02,	3.955E+02,,	-0.054
C,AM-241	,NO ,	-3.217E+01,	3.452E+01,	4.714E+01,,	-0.683

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 07:25:32.22
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:25:16.71

LIMS No., Customer Name, Client ID: WG L28851-7 EX DRES

Sample ID	: 15L28851-7			Smple Date:	1-JUN-2006 09:00:00.0
Sample Type	: WG			Geometry	: 153L082604
Quantity	: 3.08810E+00 L			BKGFILE	: 15BG060306MT
Start Channel	: 40	Energy Tol	: 1.50000	Real Time	: 0 08:00:02.85
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 08:00:00.00
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	139.55	239	717	1.71	267.39	1.66E+00	8.31E-03	21.1	2.43E+00
2	1	198.42	166	532	1.29	385.78	1.54E+00	5.75E-03	25.4	2.29E+00
3	1	294.47	54	266	1.52	578.91	1.18E+00	1.87E-03	52.0	1.30E+00
4	1	595.77	115	178	2.05	1184.61	6.54E-01	3.99E-03	25.1	1.53E+00
5	1	608.94	109	168	2.53	1211.08	6.43E-01	3.79E-03	26.4	2.68E+00
6	1	1459.75*	96	39	3.07	2920.09	3.23E-01	3.32E-03	25.4	1.57E+00
7	1	1764.01	35	18	2.17	3530.79	2.78E-01	1.22E-03	30.8	6.00E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	96	10.67*	3.227E-01	8.430E+01	8.430E+01	50.85

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 15L28851-7 Acquisition date : 12-JUN-2006 23:25:16

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	8.430E+01	8.430E+01	4.286E+01	50.85	
	Total Activity :		8.430E+01	8.430E+01			
	Grand Total Activity :		8.430E+01	8.430E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 15L28851-7

Acquisition date : 12-JUN-2006 23:25:16

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	139.55	239	717	1.71	267.39	262	9	8.31E-03	42.2	1.66E+00	
1	198.42	166	532	1.29	385.78	382	8	5.75E-03	50.9	1.54E+00	
1	294.47	54	266	1.52	578.91	576	7	1.87E-03	****	1.18E+00	
1	595.77	115	178	2.05	1184.61	1178	12	3.99E-03	50.2	6.54E-01	
1	608.94	109	168	2.53	1211.08	1205	13	3.79E-03	52.8	6.43E-01	
1	1764.01	35	18	2.17	3530.79	3524	14	1.22E-03	61.7	2.78E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	8.430E+01	8.430E+01	4.286E+01	50.85	
	Total Activity :		8.430E+01	8.430E+01			
	Grand Total Activity :		8.430E+01	8.430E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	8.430E+01	4.286E+01	3.873E+01	0.000E+00	2.176

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.849E+01		2.365E+01	3.767E+01	0.000E+00	-0.756
NA-24	-6.208E-01		6.025E-01	Half-Life too short		
CR-51	-1.211E+01		2.585E+01	4.218E+01	0.000E+00	-0.287

CO-58	-8.668E-01	2.584E+00	4.190E+00	0.000E+00	-0.207
FE-59	5.969E+00	5.165E+00	9.117E+00	0.000E+00	0.655
CO-60	-4.201E-01	2.630E+00	4.237E+00	0.000E+00	-0.099
ZN-65	2.345E+00	5.035E+00	8.546E+00	0.000E+00	0.274
SE-75	-1.493E+00	3.318E+00	5.294E+00	0.000E+00	-0.282
SR-85	1.276E+01	3.060E+00	5.662E+00	0.000E+00	2.253
Y-88	-1.178E+00	3.168E+00	5.097E+00	0.000E+00	-0.231
NB-94	1.077E+00	2.399E+00	3.974E+00	0.000E+00	0.271
NB-95	8.424E-01	2.615E+00	4.398E+00	0.000E+00	0.192
ZR-95	3.409E-01	4.790E+00	7.968E+00	0.000E+00	0.043
MO-99	-1.677E+02	3.520E+02	5.716E+02	0.000E+00	-0.293
RU-103	1.492E+00	2.930E+00	4.952E+00	0.000E+00	0.301
RU-106	-7.372E+00	2.334E+01	3.765E+01	0.000E+00	-0.196
AG-110m	8.797E-01	2.489E+00	4.122E+00	0.000E+00	0.213
SN-113	7.754E-01	3.319E+00	5.469E+00	0.000E+00	0.142
SB-124	-4.556E-01	5.939E+00	4.289E+00	0.000E+00	-0.106
SB-125	-3.273E+00	6.861E+00	1.096E+01	0.000E+00	-0.299
TE-129M	3.001E+00	3.416E+01	5.550E+01	0.000E+00	0.054
I-131	2.726E-02	6.587E+00	1.082E+01	0.000E+00	0.003
BA-133	-1.996E+00	3.233E+00	5.212E+00	0.000E+00	-0.383
CS-134	4.861E+00	3.853E+00	4.319E+00	0.000E+00	1.126
CS-136	-5.382E-01	4.241E+00	6.947E+00	0.000E+00	-0.077
CS-137	1.848E+00	2.668E+00	4.485E+00	0.000E+00	0.412
CE-139	-1.106E+00	2.235E+00	3.656E+00	0.000E+00	-0.303
BA-140	-4.236E+00	1.598E+01	2.612E+01	0.000E+00	-0.162
LA-140	-1.757E+00	5.234E+00	8.368E+00	0.000E+00	-0.210
CE-141	3.307E+00	5.163E+00	7.748E+00	0.000E+00	0.427
CE-144	-6.619E+00	1.949E+01	2.757E+01	0.000E+00	-0.240
EU-152	-1.048E+01	7.243E+00	1.139E+01	0.000E+00	-0.920
EU-154	-5.510E+00	4.970E+00	7.451E+00	0.000E+00	-0.739
RA-226	-1.946E+01	6.207E+01	9.330E+01	0.000E+00	-0.209
AC-228	1.546E+01	9.354E+00	1.656E+01	0.000E+00	0.934
TH-228	9.303E-01	4.685E+00	6.980E+00	0.000E+00	0.133
TH-232	1.540E+01	9.318E+00	1.649E+01	0.000E+00	0.934
U-235	2.016E+01	1.899E+01	2.790E+01	0.000E+00	0.723
U-238	7.591E+01	2.827E+02	4.664E+02	0.000E+00	0.163
AM-241	-3.514E+01	2.610E+01	4.201E+01	0.000E+00	-0.836

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A,15L28851-7      ,06/13/2006 07:25,06/01/2006 09:00,   3.088E+00,WG L28851-7 EX
B,15L28851-7      ,LIBD                ,06/06/2006 10:43,153L082604
C,K-40     ,YES,   8.430E+01,   4.286E+01,   3.873E+01,,    2.176
C,BE-7     ,NO ,  -2.849E+01,   2.365E+01,   3.767E+01,,   -0.756
C,CR-51    ,NO ,  -1.211E+01,   2.585E+01,   4.218E+01,,   -0.287
C,MN-54    ,NO ,   9.743E-02,   2.485E+00,   4.101E+00,,    0.024
C,CO-57    ,NO ,  -5.015E-01,   2.407E+00,   3.684E+00,,   -0.136
C,CO-58    ,NO ,  -8.668E-01,   2.584E+00,   4.190E+00,,   -0.207
C,FE-59    ,NO ,   5.969E+00,   5.165E+00,   9.117E+00,,    0.655
C,CO-60    ,NO ,  -4.201E-01,   2.630E+00,   4.237E+00,,   -0.099
C,ZN-65    ,NO ,   2.345E+00,   5.035E+00,   8.546E+00,,    0.274
C,SE-75    ,NO ,  -1.493E+00,   3.318E+00,   5.294E+00,,   -0.282
C,SR-85    ,NO ,   1.276E+01,   3.060E+00,   5.662E+00,,    2.253
C,Y-88     ,NO ,  -1.178E+00,   3.168E+00,   5.097E+00,,   -0.231
C,NB-94    ,NO ,   1.077E+00,   2.399E+00,   3.974E+00,,    0.271
C,NB-95    ,NO ,   8.424E-01,   2.615E+00,   4.398E+00,,    0.192
C,ZR-95    ,NO ,   3.409E-01,   4.790E+00,   7.968E+00,,    0.043
C,MO-99    ,NO ,  -1.677E+02,   3.520E+02,   5.716E+02,,   -0.293
C,RU-103   ,NO ,   1.492E+00,   2.930E+00,   4.952E+00,,    0.301
C,RU-106   ,NO ,  -7.372E+00,   2.334E+01,   3.765E+01,,   -0.196
C,AG-110m  ,NO ,   8.797E-01,   2.489E+00,   4.122E+00,,    0.213
C,SN-113   ,NO ,   7.754E-01,   3.319E+00,   5.469E+00,,    0.142
C,SB-124   ,NO ,  -4.556E-01,   5.939E+00,   4.289E+00,,   -0.106
C,SB-125   ,NO ,  -3.273E+00,   6.861E+00,   1.096E+01,,   -0.299
C,TE-129M  ,NO ,   3.001E+00,   3.416E+01,   5.550E+01,,    0.054
C,I-131    ,NO ,   2.726E-02,   6.587E+00,   1.082E+01,,    0.003
C,BA-133   ,NO ,  -1.996E+00,   3.233E+00,   5.212E+00,,   -0.383
C,CS-134   ,NO ,   4.861E+00,   3.853E+00,   4.319E+00,,    1.126
C,CS-136   ,NO ,  -5.382E-01,   4.241E+00,   6.947E+00,,   -0.077
C,CS-137   ,NO ,   1.848E+00,   2.668E+00,   4.485E+00,,    0.412
C,CE-139   ,NO ,  -1.106E+00,   2.235E+00,   3.656E+00,,   -0.303
C,BA-140   ,NO ,  -4.236E+00,   1.598E+01,   2.612E+01,,   -0.162
C,LA-140   ,NO ,  -1.757E+00,   5.234E+00,   8.368E+00,,   -0.210
C,CE-141   ,NO ,   3.307E+00,   5.163E+00,   7.748E+00,,    0.427
C,CE-144   ,NO ,  -6.619E+00,   1.949E+01,   2.757E+01,,   -0.240
C,EU-152   ,NO ,  -1.048E+01,   7.243E+00,   1.139E+01,,   -0.920
C,EU-154   ,NO ,  -5.510E+00,   4.970E+00,   7.451E+00,,   -0.739
C,RA-226   ,NO ,  -1.946E+01,   6.207E+01,   9.330E+01,,   -0.209
C,AC-228   ,NO ,   1.546E+01,   9.354E+00,   1.656E+01,,    0.934
C,TH-228   ,NO ,   9.303E-01,   4.685E+00,   6.980E+00,,    0.133
C,TH-232   ,NO ,   1.540E+01,   9.318E+00,   1.649E+01,,    0.934
C,U-235    ,NO ,   2.016E+01,   1.899E+01,   2.790E+01,,    0.723
C,U-238    ,NO ,   7.591E+01,   2.827E+02,   4.664E+02,,    0.163
C,AM-241   ,NO ,  -3.514E+01,   2.610E+01,   4.201E+01,,   -0.836
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 13:24:05.67
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 13-JUN-2006 10:07:34.92

LIMS No., Customer Name, Client ID: WG L28851-8 DRESDEN

Sample ID : 04L28851-8
Sample Type : WG
Quantity : 3.12170E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 09:40:00.0
Geometry : 043L082004
BKGFILE : 04BG060305MT
Real Time : 0 03:16:23.99
Live time : 0 03:16:22.02

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	64.28	226	618	4.04	129.23	5.89E-01	1.92E-02	26.7	3.62E+00
2	1	139.79*	66	310	1.67	280.17	2.04E+00	5.59E-03	54.5	1.60E+00
3	1	198.46*	65	211	1.09	397.45	1.86E+00	5.48E-03	41.9	1.02E+00
4	1	595.72	48	72	2.06	1191.65	8.63E-01	4.11E-03	33.6	4.23E+00
5	1	1130.71	20	14	2.19	2261.36	5.23E-01	1.67E-03	39.8	2.35E+00
6	1	1173.18*	20	28	3.09	2346.29	5.08E-01	1.73E-03	62.2	4.16E+00
7	1	1460.88*	11	26	2.67	2921.61	4.30E-01	9.23E-04	129.0	8.22E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	11	10.67*	4.296E-01	1.743E+01	1.743E+01	257.92

Nuclide Type: activation

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CO-60	1173.22	20	100.00	5.085E-01	2.939E+00	2.952E+00	124.34
	1332.49	------	100.00*	4.604E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28851-8

Acquisition date : 13-JUN-2006 10:07:34

Total number of lines in spectrum	7	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	2	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.743E+01	1.743E+01	4.496E+01	257.92	
	Total Activity :		1.743E+01	1.743E+01			

Nuclide Type : activation

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	2.939E+00	2.952E+00	3.670E+00	124.34	K
	Total Activity :		2.939E+00	2.952E+00			
	Grand Total Activity :		2.037E+01	2.038E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28851-8

Acquisition date : 13-JUN-2006 10:07:34

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	64.28	226	618	4.04	129.23	121	18	1.92E-02	53.4	5.89E-01	
1	139.79	66	310	1.67	280.17	274	11	5.59E-03	****	2.04E+00	
1	198.46	65	211	1.09	397.45	393	8	5.48E-03	83.7	1.86E+00	
1	595.72	48	72	2.06	1191.65	1188	9	4.11E-03	67.1	8.63E-01	
1	1130.71	20	14	2.19	2261.36	2257	9	1.67E-03	79.6	5.23E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	2	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.743E+01	1.743E+01	4.496E+01	257.92	
	Total Activity :		1.743E+01	1.743E+01			

Nuclide Type : activation

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	2.939E+00	2.952E+00	3.670E+00	124.34	
	Total Activity :		2.939E+00	2.952E+00			

Grand Total Activity : 2.037E+01 2.038E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.743E+01	4.496E+01	4.943E+01	0.000E+00	0.353
CO-60	2.952E+00	3.670E+00	5.647E+00	0.000E+00	0.523

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.969E+01		2.663E+01	4.594E+01	0.000E+00	0.429
NA-24	-2.947E+00		1.096E+00	Half-Life too short		
CR-51	-1.262E+01		3.290E+01	5.344E+01	0.000E+00	-0.236
MN-54	-1.324E+00		3.036E+00	4.763E+00	0.000E+00	-0.278
CO-57	-1.157E-01		2.681E+00	4.366E+00	0.000E+00	-0.027
CO-58	5.455E-01		3.219E+00	5.314E+00	0.000E+00	0.103
FE-59	1.791E+00		6.738E+00	1.122E+01	0.000E+00	0.160
ZN-65	3.473E+00		6.103E+00	1.063E+01	0.000E+00	0.327
SE-75	-5.924E+00		3.948E+00	5.940E+00	0.000E+00	-0.997
SR-85	1.906E+01		3.955E+00	7.764E+00	0.000E+00	2.455
Y-88	-3.781E-01		3.903E+00	6.370E+00	0.000E+00	-0.059
NB-94	-6.464E-01		2.799E+00	4.540E+00	0.000E+00	-0.142
NB-95	3.159E-02		3.136E+00	5.137E+00	0.000E+00	0.006
ZR-95	9.647E-01		5.627E+00	9.339E+00	0.000E+00	0.103
MO-99	-8.751E+00		4.684E+02	7.679E+02	0.000E+00	-0.011
RU-103	1.527E+00		3.477E+00	5.880E+00	0.000E+00	0.260
RU-106	1.448E+00		2.786E+01	4.651E+01	0.000E+00	0.031
AG-110m	4.548E-01		2.846E+00	4.768E+00	0.000E+00	0.095
SN-113	-7.358E-01		4.062E+00	6.555E+00	0.000E+00	-0.112
SB-124	-9.432E+00		4.886E+00	5.593E+00	0.000E+00	-1.686
SB-125	9.631E-01		7.973E+00	1.338E+01	0.000E+00	0.072
TE-129M	2.843E+01		4.174E+01	7.172E+01	0.000E+00	0.396
I-131	-1.303E+00		8.437E+00	1.371E+01	0.000E+00	-0.095
BA-133	-6.447E-01		4.151E+00	6.760E+00	0.000E+00	-0.095
CS-134	7.744E-01		3.681E+00	5.420E+00	0.000E+00	0.143
CS-136	-7.762E-01		5.609E+00	9.034E+00	0.000E+00	-0.086
CS-137	4.622E-01		3.164E+00	5.291E+00	0.000E+00	0.087
CE-139	-1.845E+00		2.721E+00	4.428E+00	0.000E+00	-0.417
BA-140	-2.257E+00		1.888E+01	3.071E+01	0.000E+00	-0.073
LA-140	1.663E-01		7.194E+00	1.183E+01	0.000E+00	0.014
CE-141	8.569E+00		6.066E+00	9.035E+00	0.000E+00	0.948
CE-144	-8.141E+00		2.394E+01	3.265E+01	0.000E+00	-0.249
EU-152	-2.219E+01		9.704E+00	1.426E+01	0.000E+00	-1.556
EU-154	5.126E+00		5.438E+00	9.153E+00	0.000E+00	0.560
RA-226	-1.337E+01		6.685E+01	1.109E+02	0.000E+00	-0.121
AC-228	6.920E+00		1.161E+01	2.062E+01	0.000E+00	0.336
TH-228	2.498E+00		5.576E+00	9.677E+00	0.000E+00	0.258
TH-232	6.893E+00		1.156E+01	2.054E+01	0.000E+00	0.336
U-235	1.385E+01		2.264E+01	3.241E+01	0.000E+00	0.427
U-238	-7.623E+01		3.313E+02	5.325E+02	0.000E+00	-0.143
AM-241	2.310E+01		3.044E+01	4.410E+01	0.000E+00	0.524

A,04L28851-8 ,06/13/2006 13:24,06/01/2006 09:40, 3.122E+00,WG L28851-8 DR
B,04L28851-8 ,LIBD ,06/13/2006 09:42,043L082004

C,K-40	,YES,	1.743E+01,	4.496E+01,	4.943E+01,,	0.353
C,CO-60	,YES,	2.952E+00,	3.670E+00,	5.647E+00,,	0.523
C,BE-7	,NO ,	1.969E+01,	2.663E+01,	4.594E+01,,	0.429
C,CR-51	,NO ,	-1.262E+01,	3.290E+01,	5.344E+01,,	-0.236
C,MN-54	,NO ,	-1.324E+00,	3.036E+00,	4.763E+00,,	-0.278
C,CO-57	,NO ,	-1.157E-01,	2.681E+00,	4.366E+00,,	-0.027
C,CO-58	,NO ,	5.455E-01,	3.219E+00,	5.314E+00,,	0.103
C,FE-59	,NO ,	1.791E+00,	6.738E+00,	1.122E+01,,	0.160
C,ZN-65	,NO ,	3.473E+00,	6.103E+00,	1.063E+01,,	0.327
C,SE-75	,NO ,	-5.924E+00,	3.948E+00,	5.940E+00,,	-0.997
C,SR-85	,NO ,	1.906E+01,	3.955E+00,	7.764E+00,,	2.455
C,Y-88	,NO ,	-3.781E-01,	3.903E+00,	6.370E+00,,	-0.059
C,NB-94	,NO ,	-6.464E-01,	2.799E+00,	4.540E+00,,	-0.142
C,NB-95	,NO ,	3.159E-02,	3.136E+00,	5.137E+00,,	0.006
C,ZR-95	,NO ,	9.647E-01,	5.627E+00,	9.339E+00,,	0.103
C,MO-99	,NO ,	-8.751E+00,	4.684E+02,	7.679E+02,,	-0.011
C,RU-103	,NO ,	1.527E+00,	3.477E+00,	5.880E+00,,	0.260
C,RU-106	,NO ,	1.448E+00,	2.786E+01,	4.651E+01,,	0.031
C,AG-110m	,NO ,	4.548E-01,	2.846E+00,	4.768E+00,,	0.095
C,SN-113	,NO ,	-7.358E-01,	4.062E+00,	6.555E+00,,	-0.112
C,SB-124	,NO ,	-9.432E+00,	4.886E+00,	5.593E+00,,	-1.686
C,SB-125	,NO ,	9.631E-01,	7.973E+00,	1.338E+01,,	0.072
C,TE-129M	,NO ,	2.843E+01,	4.174E+01,	7.172E+01,,	0.396
C,I-131	,NO ,	-1.303E+00,	8.437E+00,	1.371E+01,,	-0.095
C,BA-133	,NO ,	-6.447E-01,	4.151E+00,	6.760E+00,,	-0.095
C,CS-134	,NO ,	7.744E-01,	3.681E+00,	5.420E+00,,	0.143
C,CS-136	,NO ,	-7.762E-01,	5.609E+00,	9.034E+00,,	-0.086
C,CS-137	,NO ,	4.622E-01,	3.164E+00,	5.291E+00,,	0.087
C,CE-139	,NO ,	-1.845E+00,	2.721E+00,	4.428E+00,,	-0.417
C,BA-140	,NO ,	-2.257E+00,	1.888E+01,	3.071E+01,,	-0.073
C,LA-140	,NO ,	1.663E-01,	7.194E+00,	1.183E+01,,	0.014
C,CE-141	,NO ,	8.569E+00,	6.066E+00,	9.035E+00,,	0.948
C,CE-144	,NO ,	-8.141E+00,	2.394E+01,	3.265E+01,,	-0.249
C,EU-152	,NO ,	-2.219E+01,	9.704E+00,	1.426E+01,,	-1.556
C,EU-154	,NO ,	5.126E+00,	5.438E+00,	9.153E+00,,	0.560
C,RA-226	,NO ,	-1.337E+01,	6.685E+01,	1.109E+02,,	-0.121
C,AC-228	,NO ,	6.920E+00,	1.161E+01,	2.062E+01,,	0.336
C,TH-228	,NO ,	2.498E+00,	5.576E+00,	9.677E+00,,	0.258
C,TH-232	,NO ,	6.893E+00,	1.156E+01,	2.054E+01,,	0.336
C,U-235	,NO ,	1.385E+01,	2.264E+01,	3.241E+01,,	0.427
C,U-238	,NO ,	-7.623E+01,	3.313E+02,	5.325E+02,,	-0.143
C,AM-241	,NO ,	2.310E+01,	3.044E+01,	4.410E+01,,	0.524

Sec. Review: Analyst: DLC LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 13:24:45.70
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 13-JUN-2006 10:07:37.31

LIMS No., Customer Name, Client ID: WG L28851-9 DRESDEN

Sample ID	: 07L28851-9			Smple Date	: 1-JUN-2006 11:20:00.0
Sample Type	: WG			Geometry	: 0735L090904
Quantity	: 3.29800E+00 L			BKGFILE	: 07BG060306MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 03:17:03.89
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 03:17:01.59
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.31*	131	302	1.43	133.20	7.24E-01	1.10E-02	25.8	1.19E+00
2	1	139.95*	83	316	1.14	280.60	2.09E+00	7.06E-03	42.1	7.52E-01
3	1	596.12	60	101	2.25	1193.41	9.96E-01	5.09E-03	36.8	2.61E+00
4	1	609.24*	66	92	2.06	1219.66	9.81E-01	5.63E-03	36.3	1.70E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28851-9

Acquisition date : 13-JUN-2006 10:07:37

Total number of lines in spectrum	4	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28851-9

Acquisition date : 13-JUN-2006 10:07:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.31	131	302	1.43	133.20	130	8	1.10E-02	51.6	7.24E-01	
1	139.95	83	316	1.14	280.60	276	9	7.06E-03	84.3	2.09E+00	
1	596.12	60	101	2.25	1193.41	1186	13	5.09E-03	73.5	9.96E-01	
1	609.24	66	92	2.06	1219.66	1214	14	5.63E-03	72.5	9.81E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 4
Number of unidentified lines 4
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.110E-01		2.593E+01	4.220E+01	0.000E+00	-0.003
NA-24	1.926E-01		9.023E-01	Half-Life too short		
K-40	2.806E+01		3.989E+01	7.367E+01	0.000E+00	0.381
CR-51	-4.377E+01		2.994E+01	4.687E+01	0.000E+00	-0.934
MN-54	9.506E-01		2.722E+00	4.599E+00	0.000E+00	0.207
CO-57	-3.217E-01		2.810E+00	4.576E+00	0.000E+00	-0.070
CO-58	4.459E-01		2.955E+00	4.939E+00	0.000E+00	0.090
FE-59	-2.122E-01		6.395E+00	1.057E+01	0.000E+00	-0.020
CO-60	-5.564E-01		2.895E+00	4.645E+00	0.000E+00	-0.120
ZN-65	9.890E-01		6.000E+00	1.005E+01	0.000E+00	0.098
SE-75	-1.506E+00		3.922E+00	6.309E+00	0.000E+00	-0.239
SR-85	2.114E+01		3.761E+00	7.428E+00	0.000E+00	2.846
Y-88	-3.098E-01		3.265E+00	5.354E+00	0.000E+00	-0.058
NB-94	-1.964E+00		2.820E+00	4.416E+00	0.000E+00	-0.445
NB-95	-2.836E-01		2.954E+00	4.880E+00	0.000E+00	-0.058
ZR-95	-2.641E+00		5.214E+00	8.167E+00	0.000E+00	-0.323
MO-99	9.528E+01		4.345E+02	7.164E+02	0.000E+00	0.133
RU-103	1.340E+00		3.253E+00	5.401E+00	0.000E+00	0.248
RU-106	-1.568E+01		2.662E+01	4.231E+01	0.000E+00	-0.370
AG-110m	-4.676E-01		2.729E+00	4.427E+00	0.000E+00	-0.106
SN-113	2.083E+00		3.688E+00	6.231E+00	0.000E+00	0.334
SB-124	3.888E-03		7.255E+00	5.110E+00	0.000E+00	0.001
SB-125	1.261E+00		7.251E+00	1.199E+01	0.000E+00	0.105
TE-129M	6.877E+00		3.977E+01	6.546E+01	0.000E+00	0.105

I-131	1.033E-01	7.598E+00	1.257E+01	0.000E+00	0.008
BA-133	5.067E+00	3.813E+00	6.653E+00	0.000E+00	0.762
CS-134	4.587E+00	5.488E+00	5.262E+00	0.000E+00	0.872
CS-136	5.845E-01	4.836E+00	8.065E+00	0.000E+00	0.072
CS-137	-5.395E-01	2.939E+00	4.761E+00	0.000E+00	-0.113
CE-139	1.250E+00	2.772E+00	4.686E+00	0.000E+00	0.267
BA-140	-3.135E+00	1.827E+01	3.005E+01	0.000E+00	-0.104
LA-140	4.915E-01	5.973E+00	9.893E+00	0.000E+00	0.050
CE-141	6.247E+00	6.654E+00	9.589E+00	0.000E+00	0.651
CE-144	-7.835E+00	2.481E+01	3.386E+01	0.000E+00	-0.231
EU-152	-1.935E+01	9.164E+00	1.393E+01	0.000E+00	-1.389
EU-154	4.425E+00	5.706E+00	9.543E+00	0.000E+00	0.464
RA-226	-6.189E+01	7.070E+01	1.147E+02	0.000E+00	-0.540
AC-228	-3.950E+00	1.134E+01	1.805E+01	0.000E+00	-0.219
TH-228	2.443E+00	5.367E+00	8.995E+00	0.000E+00	0.272
TH-232	-3.934E+00	1.129E+01	1.798E+01	0.000E+00	-0.219
U-235	3.264E+01	2.417E+01	3.545E+01	0.000E+00	0.921
U-238	1.239E+02	3.094E+02	5.195E+02	0.000E+00	0.238
AM-241	-4.077E+01	2.754E+01	3.837E+01	0.000E+00	-1.063

A,07L28851-9 ,06/13/2006 13:24,06/01/2006 11:20, 3.298E+00,WG L28851-9 DR
B,07L28851-9 ,LIBD ,06/07/2006 09:32,0735L090904

C,BE-7	,NO ,	-1.110E-01,	2.593E+01,	4.220E+01,,	-0.003
C,K-40	,NO ,	2.806E+01,	3.989E+01,	7.367E+01,,	0.381
C,CR-51	,NO ,	-4.377E+01,	2.994E+01,	4.687E+01,,	-0.934
C,MN-54	,NO ,	9.506E-01,	2.722E+00,	4.599E+00,,	0.207
C,CO-57	,NO ,	-3.217E-01,	2.810E+00,	4.576E+00,,	-0.070
C,CO-58	,NO ,	4.459E-01,	2.955E+00,	4.939E+00,,	0.090
C,FE-59	,NO ,	-2.122E-01,	6.395E+00,	1.057E+01,,	-0.020
C,CO-60	,NO ,	-5.564E-01,	2.895E+00,	4.645E+00,,	-0.120
C,ZN-65	,NO ,	9.890E-01,	6.000E+00,	1.005E+01,,	0.098
C,SE-75	,NO ,	-1.506E+00,	3.922E+00,	6.309E+00,,	-0.239
C,SR-85	,NO ,	2.114E+01,	3.761E+00,	7.428E+00,,	2.846
C,Y-88	,NO ,	-3.098E-01,	3.265E+00,	5.354E+00,,	-0.058
C,NB-94	,NO ,	-1.964E+00,	2.820E+00,	4.416E+00,,	-0.445
C,NB-95	,NO ,	-2.836E-01,	2.954E+00,	4.880E+00,,	-0.058
C,ZR-95	,NO ,	-2.641E+00,	5.214E+00,	8.167E+00,,	-0.323
C,MO-99	,NO ,	9.528E+01,	4.345E+02,	7.164E+02,,	0.133
C,RU-103	,NO ,	1.340E+00,	3.253E+00,	5.401E+00,,	0.248
C,RU-106	,NO ,	-1.568E+01,	2.662E+01,	4.231E+01,,	-0.370
C,AG-110m	,NO ,	-4.676E-01,	2.729E+00,	4.427E+00,,	-0.106
C,SN-113	,NO ,	2.083E+00,	3.688E+00,	6.231E+00,,	0.334
C,SB-124	,NO ,	3.888E-03,	7.255E+00,	5.110E+00,,	0.001
C,SB-125	,NO ,	1.261E+00,	7.251E+00,	1.199E+01,,	0.105
C,TE-129M	,NO ,	6.877E+00,	3.977E+01,	6.546E+01,,	0.105
C,I-131	,NO ,	1.033E-01,	7.598E+00,	1.257E+01,,	0.008
C,BA-133	,NO ,	5.067E+00,	3.813E+00,	6.653E+00,,	0.762
C,CS-134	,NO ,	4.587E+00,	5.488E+00,	5.262E+00,,	0.872
C,CS-136	,NO ,	5.845E-01,	4.836E+00,	8.065E+00,,	0.072
C,CS-137	,NO ,	-5.395E-01,	2.939E+00,	4.761E+00,,	-0.113
C,CE-139	,NO ,	1.250E+00,	2.772E+00,	4.686E+00,,	0.267
C,BA-140	,NO ,	-3.135E+00,	1.827E+01,	3.005E+01,,	-0.104
C,LA-140	,NO ,	4.915E-01,	5.973E+00,	9.893E+00,,	0.050
C,CE-141	,NO ,	6.247E+00,	6.654E+00,	9.589E+00,,	0.651
C,CE-144	,NO ,	-7.835E+00,	2.481E+01,	3.386E+01,,	-0.231
C,EU-152	,NO ,	-1.935E+01,	9.164E+00,	1.393E+01,,	-1.389
C,EU-154	,NO ,	4.425E+00,	5.706E+00,	9.543E+00,,	0.464
C,RA-226	,NO ,	-6.189E+01,	7.070E+01,	1.147E+02,,	-0.540
C,AC-228	,NO ,	-3.950E+00,	1.134E+01,	1.805E+01,,	-0.219
C,TH-228	,NO ,	2.443E+00,	5.367E+00,	8.995E+00,,	0.272
C,TH-232	,NO ,	-3.934E+00,	1.129E+01,	1.798E+01,,	-0.219
C,U-235	,NO ,	3.264E+01,	2.417E+01,	3.545E+01,,	0.921
C,U-238	,NO ,	1.239E+02,	3.094E+02,	5.195E+02,,	0.238
C,AM-241	,NO ,	-4.077E+01,	2.754E+01,	3.837E+01,,	-1.063

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 14:17:41.39
TBE23 03017322 HpGe ********** Aquisition Date/Time: 13-JUN-2006 10:42:16.70

LIMS No., Customer Name, Client ID: WG L28851-10 DRESDEN

Sample ID : 23L28851-10
Sample Type : WG
Quantity : 3.21660E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 11:45:00.0
Geometry : 233L082404
BKGFILE : 23BG060306MT
Real Time : 0 03:35:10.56
Live time : 0 03:35:01.68

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	5	33.75*	25	56	1.26	67.82	8.19E-02	1.95E-03	92.8	2.21E+00
2	0	92.65*	14	607	0.86	185.54	1.94E+00	1.05E-03	371.4	
3	0	139.55*	63	440	1.11	279.27	2.32E+00	4.85E-03	62.7	
4	0	185.60*	8	350	0.98	371.31	2.17E+00	5.90E-04	492.7	
5	0	197.90*	97	350	1.62	395.90	2.11E+00	7.52E-03	38.2	
6	0	238.12*	24	311	0.95	476.28	1.90E+00	1.85E-03	147.3	
7	0	582.61*	32	68	1.64	1164.92	9.72E-01	2.47E-03	57.1	
8	0	608.79*	26	96	1.38	1217.26	9.41E-01	2.05E-03	87.4	
9	0	910.65*	43	34	2.80	1820.83	7.09E-01	3.31E-03	37.6	
10	0	1460.72*	15	39	2.26	2921.07	5.10E-01	1.19E-03	139.6	
11	0	1765.08*	9	14	1.46	3530.05	4.38E-01	6.76E-04	124.4	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	15	10.67*	5.096E-01	1.836E+01	1.836E+01	279.14
RA-226	186.21	8	3.28*	2.175E+00	6.950E+00	6.950E+00	985.35
AC-228	835.50	------	1.75	7.515E-01	------ Line Not Found		------
	911.07	43	27.70*	7.086E-01	1.415E+01	1.421E+01	75.15
TH-228	238.63	24	44.60*	1.903E+00	1.836E+00	1.858E+00	294.68
	240.98	------	3.95	1.888E+00	------ Line Not Found		------
TH-232	583.14	32	30.25	9.720E-01	7.054E+00	7.054E+00	114.19
	911.07	43	27.70*	7.086E-01	1.415E+01	1.415E+01	75.15
	969.11	------	16.60	6.793E-01	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28851-10

Acquisition date : 13-JUN-2006 10:42:16

Total number of lines in spectrum	11	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	5	45.45%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.836E+01	1.836E+01	5.124E+01	279.14	
RA-226	1600.00Y	1.00	6.950E+00	6.950E+00	68.48E+00	985.35	
AC-228	5.75Y	1.00	1.415E+01	1.421E+01	1.068E+01	75.15	
TH-228	1.91Y	1.01	1.836E+00	1.858E+00	5.475E+00	294.68	
TH-232	1.41E+10Y	1.00	1.415E+01	1.415E+01	1.064E+01	75.15	
	Total Activity :		5.545E+01	5.552E+01			

Grand Total Activity : 5.545E+01 5.552E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28851-10

Acquisition date : 13-JUN-2006 10:42:16

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	33.75	25	56	1.26	67.82	64	14	1.95E-03	****	8.19E-02	
0	92.65	14	607	0.86	185.54	181	10	1.05E-03	****	1.94E+00	
0	139.55	63	440	1.11	279.27	276	8	4.85E-03	****	2.32E+00	
0	197.90	97	350	1.62	395.90	392	9	7.52E-03	76.3	2.11E+00	
0	608.79	26	96	1.38	1217.26	1211	12	2.05E-03	****	9.41E-01	
0	1765.08	9	14	1.46	3530.05	3524	14	6.76E-04	****	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	5	45.45%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.836E+01	1.836E+01	5.124E+01	279.14	
RA-226	1600.00Y	1.00	6.950E+00	6.950E+00	68.48E+00	985.35	
AC-228	5.75Y	1.00	7.098E+00	7.127E+00	13.39E+00	187.94	
TH-228	1.91Y	1.01	1.836E+00	1.858E+00	5.475E+00	294.68	
TH-232	1.41E+10Y	1.00	7.054E+00	7.054E+00	8.054E+00	114.19	
	Total Activity :		4.129E+01	4.134E+01			

Grand Total Activity : 4.129E+01 4.134E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.836E+01	5.124E+01	4.660E+01	0.000E+00	0.394
RA-226	6.950E+00	6.848E+01	1.163E+02	0.000E+00	0.060
AC-228	7.127E+00	1.339E+01	1.723E+01	0.000E+00	0.414
TH-228	1.858E+00	5.475E+00	8.696E+00	0.000E+00	0.214
TH-232	7.054E+00	8.054E+00	1.710E+01	0.000E+00	0.412

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	3.804E+00		2.660E+01	4.551E+01	0.000E+00	0.084
NA-24	-3.247E-01		8.590E-01	Half-Life too short		
CR-51	-5.612E+01		3.194E+01	5.109E+01	0.000E+00	-1.098
MN-54	1.347E+00		2.741E+00	4.875E+00	0.000E+00	0.276
CO-57	-4.173E+00		2.984E+00	4.861E+00	0.000E+00	-0.858
CO-58	1.180E+00		2.943E+00	5.215E+00	0.000E+00	0.226
FE-59	-1.519E+00		5.855E+00	1.011E+01	0.000E+00	-0.150
CO-60	8.007E-01		2.694E+00	4.860E+00	0.000E+00	0.165
ZN-65	3.315E+00		5.867E+00	1.068E+01	0.000E+00	0.310
SE-75	-2.789E+00		4.032E+00	6.750E+00	0.000E+00	-0.413
SR-85	1.427E+01		3.648E+00	6.991E+00	0.000E+00	2.041
Y-88	-4.255E+00		2.831E+00	4.206E+00	0.000E+00	-1.012
NB-94	2.479E+00		2.504E+00	4.583E+00	0.000E+00	0.541
NB-95	2.498E+00		2.978E+00	5.402E+00	0.000E+00	0.462
ZR-95	-3.778E+00		5.325E+00	8.819E+00	0.000E+00	-0.428
MO-99	-1.197E+02		3.769E+02	6.424E+02	0.000E+00	-0.186
RU-103	-1.254E+00		3.453E+00	5.754E+00	0.000E+00	-0.218
RU-106	8.419E+00		2.591E+01	4.575E+01	0.000E+00	0.184
AG-110m	1.584E+00		2.615E+00	4.700E+00	0.000E+00	0.337
SN-113	3.724E-01		3.715E+00	6.361E+00	0.000E+00	0.059
SB-124	-8.843E+00		3.907E+00	4.725E+00	0.000E+00	-1.872
SB-125	4.827E+00		8.109E+00	1.414E+01	0.000E+00	0.341
TE-129M	-4.242E+01		3.835E+01	6.171E+01	0.000E+00	-0.687
I-131	2.609E+00		7.601E+00	1.315E+01	0.000E+00	0.198
BA-133	-5.762E-01		3.897E+00	6.602E+00	0.000E+00	-0.087
CS-134	-1.661E+00		3.638E+00	5.140E+00	0.000E+00	-0.323
CS-136	-3.413E-01		4.865E+00	8.380E+00	0.000E+00	-0.041
CS-137	3.015E+00		2.964E+00	5.416E+00	0.000E+00	0.557
CE-139	-1.440E+00		3.100E+00	5.126E+00	0.000E+00	-0.281
BA-140	1.075E+01		1.825E+01	3.194E+01	0.000E+00	0.336
LA-140	2.495E+00		5.167E+00	9.738E+00	0.000E+00	0.256
CE-141	-3.592E+00		7.670E+00	1.073E+01	0.000E+00	-0.335
CE-144	-7.617E+00		2.783E+01	3.930E+01	0.000E+00	-0.194
EU-152	-1.368E+01		9.269E+00	1.495E+01	0.000E+00	-0.915
EU-154	-6.786E+00		6.106E+00	1.001E+01	0.000E+00	-0.678
U-235	-8.937E-01		2.787E+01	3.902E+01	0.000E+00	-0.023
U-238	-1.036E+02		2.876E+02	4.741E+02	0.000E+00	-0.218
AM-241	-7.161E+00		1.707E+01	2.788E+01	0.000E+00	-0.257

A,23L28851-10 ,06/13/2006 14:17,06/01/2006 11:45, 3.217E+00,WG L28851-10 D
B,23L28851-10 ,LIBD ,06/01/2006 10:14,233L082404

C,K-40	,YES,	1.836E+01,	5.124E+01,	4.660E+01,,		0.394
C,RA-226	,YES,	6.950E+00,	6.848E+01,	1.163E+02,,		0.060
C,AC-228	,YES,	7.127E+00,	1.339E+01,	1.723E+01,,		0.414
C,TH-228	,YES,	1.858E+00,	5.475E+00,	8.696E+00,,		0.214
C,TH-232	,YES,	7.054E+00,	8.054E+00,	1.710E+01,,		0.412
C,BE-7	,NO ,	3.804E+00,	2.660E+01,	4.551E+01,,		0.084
C,CR-51	,NO ,	-5.612E+01,	3.194E+01,	5.109E+01,,		-1.098
C,MN-54	,NO ,	1.347E+00,	2.741E+00,	4.875E+00,,		0.276
C,CO-57	,NO ,	-4.173E+00,	2.984E+00,	4.861E+00,,		-0.858
C,CO-58	,NO ,	1.180E+00,	2.943E+00,	5.215E+00,,		0.226
C,FE-59	,NO ,	-1.519E+00,	5.855E+00,	1.011E+01,,		-0.150
C,CO-60	,NO ,	8.007E-01,	2.694E+00,	4.860E+00,,		0.165
C,ZN-65	,NO ,	3.315E+00,	5.867E+00,	1.068E+01,,		0.310
C,SE-75	,NO ,	-2.789E+00,	4.032E+00,	6.750E+00,,		-0.413
C,SR-85	,NO ,	1.427E+01,	3.648E+00,	6.991E+00,,		2.041
C,Y-88	,NO ,	-4.255E+00,	2.831E+00,	4.206E+00,,		-1.012
C,NB-94	,NO ,	2.479E+00,	2.504E+00,	4.583E+00,,		0.541
C,NB-95	,NO ,	2.498E+00,	2.978E+00,	5.402E+00,,		0.462
C,ZR-95	,NO ,	-3.778E+00,	5.325E+00,	8.819E+00,,		-0.428
C,MO-99	,NO ,	-1.197E+02,	3.769E+02,	6.424E+02,,		-0.186
C,RU-103	,NO ,	-1.254E+00,	3.453E+00,	5.754E+00,,		-0.218
C,RU-106	,NO ,	8.419E+00,	2.591E+01,	4.575E+01,,		0.184
C,AG-110m	,NO ,	1.584E+00,	2.615E+00,	4.700E+00,,		0.337
C,SN-113	,NO ,	3.724E-01,	3.715E+00,	6.361E+00,,		0.059
C,SB-124	,NO ,	-8.843E+00,	3.907E+00,	4.725E+00,,		-1.872
C,SB-125	,NO ,	4.827E+00,	8.109E+00,	1.414E+01,,		0.341
C,TE-129M	,NO ,	-4.242E+01,	3.835E+01,	6.171E+01,,		-0.687
C,I-131	,NO ,	2.609E+00,	7.601E+00,	1.315E+01,,		0.198
C,BA-133	,NO ,	-5.762E-01,	3.897E+00,	6.602E+00,,		-0.087
C,CS-134	,NO ,	-1.661E+00,	3.638E+00,	5.140E+00,,		-0.323
C,CS-136	,NO ,	-3.413E-01,	4.865E+00,	8.380E+00,,		-0.041
C,CS-137	,NO ,	3.015E+00,	2.964E+00,	5.416E+00,,		0.557
C,CE-139	,NO ,	-1.440E+00,	3.100E+00,	5.126E+00,,		-0.281
C,BA-140	,NO ,	1.075E+01,	1.825E+01,	3.194E+01,,		0.336
C,LA-140	,NO ,	2.495E+00,	5.167E+00,	9.738E+00,,		0.256
C,CE-141	,NO ,	-3.592E+00,	7.670E+00,	1.073E+01,,		-0.335
C,CE-144	,NO ,	-7.617E+00,	2.783E+01,	3.930E+01,,		-0.194
C,EU-152	,NO ,	-1.368E+01,	9.269E+00,	1.495E+01,,		-0.915
C,EU-154	,NO ,	-6.786E+00,	6.106E+00,	1.001E+01,,		-0.678
C,U-235	,NO ,	-8.937E-01,	2.787E+01,	3.902E+01,,		-0.023
C,U-238	,NO ,	-1.036E+02,	2.876E+02,	4.741E+02,,		-0.218
C,AM-241	,NO ,	-7.161E+00,	1.707E+01,	2.788E+01,,		-0.257

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 15:58:41.27
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 13-JUN-2006 13:22:29.95

LIMS No., Customer Name, Client ID: WG L28851-11 DRESDEN

Sample ID : 13L28851-11
Sample Type : WG
Quantity : 3.25340E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 14:10:00.
Geometry : 133L082404
BKGFILE : 13BG060306MT
Real Time : 0 02:36:04.05
Live time : 0 02:36:01.39

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	92.79*	16	332	1.04	185.54	1.74E+00	1.70E-03	235.5	1.49E+00
2	1	140.06*	59	264	1.69	280.09	2.27E+00	6.31E-03	52.1	8.92E-01
3	1	185.58*	10	231	1.33	371.14	2.18E+00	1.11E-03	293.7	1.81E+00
4	1	198.73*	68	315	1.74	397.44	2.12E+00	7.29E-03	53.7	1.91E+00
5	1	238.32*	16	225	1.10	476.62	1.94E+00	1.66E-03	199.2	1.70E+00
6	1	351.76*	36	81	1.10	703.53	1.51E+00	3.86E-03	52.1	8.30E-01
7	1	595.74	46	94	1.53	1191.62	1.02E+00	4.94E-03	43.0	2.49E+00
8	1	609.18*	35	80	1.51	1218.52	1.01E+00	3.72E-03	59.0	1.13E+00
9	1	1238.67*	8	27	2.17	2478.24	5.80E-01	8.90E-04	138.7	1.45E+00
10	1	1461.10*	13	11	2.92	2923.50	5.14E-01	1.40E-03	105.0	1.43E+00
11	1	1764.66*	13	14	4.03	3531.27	4.55E-01	1.34E-03	80.2	1.38E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	13	10.67*	5.143E-01	2.112E+01	2.112E+01	209.92
RA-226	186.21	10	3.28*	2.180E+00	1.285E+01	1.285E+01	587.38
TH-228	238.63	16	44.60*	1.939E+00	1.592E+00	1.614E+00	398.44
	240.98	------	3.95	1.927E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	2.278E+00	------	Line Not Found	------
	163.35	------	4.70	2.256E+00	------	Line Not Found	------
	185.71	10	54.00	2.180E+00	7.805E-01	7.805E-01	587.38
	205.31	------	4.70	2.093E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28851-11

Acquisition date : 13-JUN-2006 13:22:29

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.112E+01	2.112E+01	4.433E+01	209.92	
RA-226	1600.00Y	1.00	1.285E+01	1.285E+01	7.547E+01	587.38	
TH-228	1.91Y	1.01	1.592E+00	1.614E+00	6.431E+00	398.44	
U-235	7.04E+08Y	1.00	7.805E-01	7.805E-01	45.84E-01	587.38	K
			---------	---------			
	Total Activity :		3.634E+01	3.636E+01			
	Grand Total Activity :		3.634E+01	3.636E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28851-11

Acquisition date : 13-JUN-2006 13:22:29

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	92.79	16	332	1.04	185.54	181	9	1.70E-03	****	1.74E+00	
1	140.06	59	264	1.69	280.09	276	8	6.31E-03	****	2.27E+00	
1	198.73	68	315	1.74	397.44	392	11	7.29E-03	****	2.12E+00	
1	351.76	36	81	1.10	703.53	700	7	3.86E-03	****	1.51E+00	
1	595.74	46	94	1.53	1191.62	1186	11	4.94E-03	86.0	1.02E+00	
1	609.18	35	80	1.51	1218.52	1213	11	3.72E-03	****	1.01E+00	
1	1238.67	8	27	2.17	2478.24	2471	12	8.90E-04	****	5.80E-01	
1	1764.66	13	14	4.03	3531.27	3525	14	1.34E-03	****	4.55E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.112E+01	2.112E+01	4.433E+01	209.92	
RA-226	1600.00Y	1.00	1.285E+01	1.285E+01	7.547E+01	587.38	
TH-228	1.91Y	1.01	1.592E+00	1.614E+00	6.431E+00	398.44	
			---------	---------			
	Total Activity :		3.556E+01	3.558E+01			

Grand Total Activity : 3.556E+01 3.558E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.112E+01	4.433E+01	4.205E+01	0.000E+00	0.502
RA-226	1.285E+01	7.547E+01	1.155E+02	0.000E+00	0.111
TH-228	1.614E+00	6.431E+00	8.290E+00	0.000E+00	0.195

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-1.019E+01	2.842E+01	4.500E+01	0.000E+00	-0.226
NA-24	-6.049E+00	9.912E+00	Half-Life too short		
CR-51	-1.161E+01	3.481E+01	5.712E+01	0.000E+00	-0.203
MN-54	1.669E+00	3.128E+00	5.339E+00	0.000E+00	0.313
CO-57	6.124E-01	2.835E+00	4.681E+00	0.000E+00	0.131
CO-58	-2.066E+00	3.427E+00	5.385E+00	0.000E+00	-0.384
FE-59	8.709E+00	6.844E+00	1.247E+01	0.000E+00	0.698
CO-60	7.048E-01	3.323E+00	5.605E+00	0.000E+00	0.126
ZN-65	5.197E+00	6.715E+00	1.175E+01	0.000E+00	0.442
SE-75	6.599E-01	4.576E+00	7.504E+00	0.000E+00	0.088
SR-85	1.797E+01	4.144E+00	8.038E+00	0.000E+00	2.236
Y-88	-1.459E+00	3.797E+00	5.940E+00	0.000E+00	-0.246
NB-94	-2.032E+00	2.874E+00	4.559E+00	0.000E+00	-0.446
NB-95	2.055E+00	3.604E+00	6.183E+00	0.000E+00	0.332
ZR-95	-2.845E+00	6.059E+00	9.692E+00	0.000E+00	-0.294
MO-99	1.002E+03	8.551E+02	1.517E+03	0.000E+00	0.661
RU-103	1.589E+00	3.948E+00	6.707E+00	0.000E+00	0.237
RU-106	-1.953E+01	3.091E+01	4.857E+01	0.000E+00	-0.402
AG-110m	-1.582E+00	3.084E+00	4.845E+00	0.000E+00	-0.326
SN-113	-1.797E+00	4.187E+00	6.728E+00	0.000E+00	-0.267
SB-124	-4.464E+00	9.749E+00	6.470E+00	0.000E+00	-0.690
SB-125	4.165E+00	8.788E+00	1.472E+01	0.000E+00	0.283
TE-129M	1.640E+01	4.591E+01	7.608E+01	0.000E+00	0.216
I-131	-1.742E+00	1.024E+01	1.678E+01	0.000E+00	-0.104
BA-133	-3.410E-01	4.876E+00	6.819E+00	0.000E+00	-0.050
CS-134	1.859E+00	6.048E+00	6.219E+00	0.000E+00	0.299
CS-136	9.534E-01	5.841E+00	9.733E+00	0.000E+00	0.098
CS-137	1.314E+00	3.250E+00	5.334E+00	0.000E+00	0.246
CE-139	8.146E-01	3.084E+00	5.020E+00	0.000E+00	0.162
BA-140	5.581E+00	2.213E+01	3.718E+01	0.000E+00	0.150
LA-140	4.727E+00	7.881E+00	1.363E+01	0.000E+00	0.347
CE-141	2.564E+00	7.733E+00	1.092E+01	0.000E+00	0.235
CE-144	-1.036E+01	2.529E+01	3.614E+01	0.000E+00	-0.287
EU-152	-1.527E+01	1.119E+01	1.546E+01	0.000E+00	-0.988
EU-154	1.187E-01	5.833E+00	9.562E+00	0.000E+00	0.012
AC-228	8.568E+00	1.275E+01	2.167E+01	0.000E+00	0.395
TH-232	8.528E+00	1.269E+01	2.157E+01	0.000E+00	0.395
U-235	-4.472E+00	2.680E+01	3.692E+01	0.000E+00	-0.121
U-238	-1.708E+02	3.521E+02	5.492E+02	0.000E+00	-0.311
AM-241	-3.438E+01	2.650E+01	4.082E+01	0.000E+00	-0.842

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A,13L28851-11     ,06/13/2006 15:58,05/30/2006 14:10,   3.253E+00,WG L28851-11 D
B,13L28851-11     ,LIBD                ,06/13/2006 09:43,133L082404
C,K-40     ,YES,   2.112E+01,   4.433E+01,   4.205E+01,,    0.502
C,RA-226   ,YES,   1.285E+01,   7.547E+01,   1.155E+02,,    0.111
C,TH-228   ,YES,   1.614E+00,   6.431E+00,   8.290E+00,,    0.195
C,BE-7     ,NO ,  -1.019E+01,   2.842E+01,   4.500E+01,,   -0.226
C,CR-51    ,NO ,  -1.161E+01,   3.481E+01,   5.712E+01,,   -0.203
C,MN-54    ,NO ,   1.669E+00,   3.128E+00,   5.339E+00,,    0.313
C,CO-57    ,NO ,   6.124E-01,   2.835E+00,   4.681E+00,,    0.131
C,CO-58    ,NO ,  -2.066E+00,   3.427E+00,   5.385E+00,,   -0.384
C,FE-59    ,NO ,   8.709E+00,   6.844E+00,   1.247E+01,,    0.698
C,CO-60    ,NO ,   7.048E-01,   3.323E+00,   5.605E+00,,    0.126
C,ZN-65    ,NO ,   5.197E+00,   6.715E+00,   1.175E+01,,    0.442
C,SE-75    ,NO ,   6.599E-01,   4.576E+00,   7.504E+00,,    0.088
C,SR-85    ,NO ,   1.797E+01,   4.144E+00,   8.038E+00,,    2.236
C,Y-88     ,NO ,  -1.459E+00,   3.797E+00,   5.940E+00,,   -0.246
C,NB-94    ,NO ,  -2.032E+00,   2.874E+00,   4.559E+00,,   -0.446
C,NB-95    ,NO ,   2.055E+00,   3.604E+00,   6.183E+00,,    0.332
C,ZR-95    ,NO ,  -2.845E+00,   6.059E+00,   9.692E+00,,   -0.294
C,MO-99    ,NO ,   1.002E+03,   8.551E+02,   1.517E+03,,    0.661
C,RU-103   ,NO ,   1.589E+00,   3.948E+00,   6.707E+00,,    0.237
C,RU-106   ,NO ,  -1.953E+01,   3.091E+01,   4.857E+01,,   -0.402
C,AG-110m  ,NO ,  -1.582E+00,   3.084E+00,   4.845E+00,,   -0.326
C,SN-113   ,NO ,  -1.797E+00,   4.187E+00,   6.728E+00,,   -0.267
C,SB-124   ,NO ,  -4.464E+00,   9.749E+00,   6.470E+00,,   -0.690
C,SB-125   ,NO ,   4.165E+00,   8.788E+00,   1.472E+01,,    0.283
C,TE-129M  ,NO ,   1.640E+01,   4.591E+01,   7.608E+01,,    0.216
C,I-131    ,NO ,  -1.742E+00,   1.024E+01,   1.678E+01,,   -0.104
C,BA-133   ,NO ,  -3.410E-01,   4.876E+00,   6.819E+00,,   -0.050
C,CS-134   ,NO ,   1.859E+00,   6.048E+00,   6.219E+00,,    0.299
C,CS-136   ,NO ,   9.534E-01,   5.841E+00,   9.733E+00,,    0.098
C,CS-137   ,NO ,   1.314E+00,   3.250E+00,   5.334E+00,,    0.246
C,CE-139   ,NO ,   8.146E-01,   3.084E+00,   5.020E+00,,    0.162
C,BA-140   ,NO ,   5.581E+00,   2.213E+01,   3.718E+01,,    0.150
C,LA-140   ,NO ,   4.727E+00,   7.881E+00,   1.363E+01,,    0.347
C,CE-141   ,NO ,   2.564E+00,   7.733E+00,   1.092E+01,,    0.235
C,CE-144   ,NO ,  -1.036E+01,   2.529E+01,   3.614E+01,,   -0.287
C,EU-152   ,NO ,  -1.527E+01,   1.119E+01,   1.546E+01,,   -0.988
C,EU-154   ,NO ,   1.187E-01,   5.833E+00,   9.562E+00,,    0.012
C,AC-228   ,NO ,   8.568E+00,   1.275E+01,   2.167E+01,,    0.395
C,TH-232   ,NO ,   8.528E+00,   1.269E+01,   2.157E+01,,    0.395
C,U-235    ,NO ,  -4.472E+00,   2.680E+01,   3.692E+01,,   -0.121
C,U-238    ,NO ,  -1.708E+02,   3.521E+02,   5.492E+02,,   -0.311
C,AM-241   ,NO ,  -3.438E+01,   2.650E+01,   4.082E+01,,   -0.842
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Sec. Review: Analyst: RW LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 16:29:54.41
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 13-JUN-2006 13:29:48.93

LIMS No., Customer Name, Client ID: WG L28851-12 DRESDEN

Sample ID : 04L28851-12
Sample Type : WG
Quantity : 3.07470E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 15:15:00.
Geometry : 043L082004
BKGFILE : 04BG060306MT
Real Time : 0 03:00:01.81
Live time : 0 03:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.37*	71	274	1.50	133.39	6.65E-01	6.58E-03	43.4	1.49E+00
2	1	139.77	75	255	1.28	280.12	2.04E+00	6.91E-03	40.5	1.41E+00
3	1	175.32	52	212	1.92	351.19	1.97E+00	4.78E-03	52.8	1.65E+00
4	1	185.85*	31	214	2.33	372.24	1.92E+00	2.85E-03	98.9	8.41E-01
5	1	198.64*	46	192	1.37	397.81	1.86E+00	4.30E-03	62.6	1.39E+00
6	1	238.53*	28	168	1.59	477.56	1.68E+00	2.55E-03	99.7	1.63E+00
7	1	351.87*	32	89	1.96	704.14	1.28E+00	3.00E-03	64.9	2.59E+00
8	1	595.60	50	94	2.71	1191.42	8.63E-01	4.63E-03	39.6	2.82E+00
9	1	609.21*	34	81	1.53	1218.63	8.49E-01	3.15E-03	62.3	5.52E+00
10	1	1333.70	58	14	1.38	2667.28	4.60E-01	5.35E-03	16.6	1.01E+01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	31	3.28*	1.922E+00	3.973E+01	3.973E+01	197.85
TH-228	238.63	28	44.60*	1.680E+00	2.990E+00	3.031E+00	199.30
	240.98	------	3.95	1.669E+00	------ Line Not Found		------
U-235	143.76	------	10.50*	2.041E+00	------ Line Not Found		------
	163.35	------	4.70	2.007E+00	------ Line Not Found		------
	185.71	31	54.00	1.922E+00	2.413E+00	2.413E+00	197.85
	205.31	------	4.70	1.833E+00	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28851-12

Acquisition date : 13-JUN-2006 13:29:48

Total number of lines in spectrum	10	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	2	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	3.973E+01	3.973E+01	7.860E+01	197.85	
TH-228	1.91Y	1.01	2.990E+00	3.031E+00	6.042E+00	199.30	
U-235	7.04E+08Y	1.00	2.413E+00	2.413E+00	4.774E+00	197.85	K
	Total Activity :		4.513E+01	4.517E+01			

Grand Total Activity : 4.513E+01 4.517E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28851-12

Acquisition date : 13-JUN-2006 13:29:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.37	71	274	1.50	133.39	130	8	6.58E-03	86.7	6.65E-01	
1	139.77	75	255	1.28	280.12	277	9	6.91E-03	81.1	2.04E+00	
1	175.32	52	212	1.92	351.19	347	9	4.78E-03	****	1.97E+00	
1	198.64	46	192	1.37	397.81	392	10	4.30E-03	****	1.86E+00	
1	351.87	32	89	1.96	704.14	700	10	3.00E-03	****	1.28E+00	
1	595.60	50	94	2.71	1191.42	1186	11	4.63E-03	79.2	8.63E-01	
1	609.21	34	81	1.53	1218.63	1214	13	3.15E-03	****	8.49E-01	
1	1333.70	58	14	1.38	2667.28	2661	12	5.35E-03	33.2	4.60E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	2	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	3.973E+01	3.973E+01	7.860E+01	197.85	
TH-228	1.91Y	1.01	2.990E+00	3.031E+00	6.042E+00	199.30	
	Total Activity :		4.272E+01	4.276E+01			

Grand Total Activity : 4.272E+01 4.276E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	3.973E+01	7.860E+01	1.147E+02	0.000E+00	0.346
TH-228	3.031E+00	6.042E+00	9.014E+00	0.000E+00	0.336

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.277E+01		2.997E+01	5.083E+01	0.000E+00	0.251

NA-24	-1.968E+01	9.432E+00	Half-Life too short		
K-40	5.617E+00	4.409E+01	8.179E+01	0.000E+00	0.069
CR-51	-9.061E+00	3.618E+01	5.910E+01	0.000E+00	-0.153
MN-54	-2.061E+00	3.100E+00	4.743E+00	0.000E+00	-0.435
CO-57	3.976E-01	2.777E+00	4.553E+00	0.000E+00	0.087
CO-58	1.536E+00	3.569E+00	6.012E+00	0.000E+00	0.256
FE-59	3.897E+00	7.967E+00	1.350E+01	0.000E+00	0.289
CO-60	1.050E+00	3.756E+00	6.269E+00	0.000E+00	0.167
ZN-65	3.021E+00	7.045E+00	1.212E+01	0.000E+00	0.249
SE-75	-2.503E+00	4.386E+00	6.912E+00	0.000E+00	-0.362
SR-85	1.920E+01	4.330E+00	8.437E+00	0.000E+00	2.276
Y-88	-1.209E+00	4.122E+00	6.564E+00	0.000E+00	-0.184
NB-94	3.234E-01	3.070E+00	5.097E+00	0.000E+00	0.063
NB-95	1.316E+00	3.260E+00	5.512E+00	0.000E+00	0.239
ZR-95	-1.656E+00	6.077E+00	9.739E+00	0.000E+00	-0.170
MO-99	-3.377E+02	7.519E+02	1.190E+03	0.000E+00	-0.284
RU-103	5.984E-01	3.955E+00	6.581E+00	0.000E+00	0.091
RU-106	-7.860E+00	3.220E+01	5.051E+01	0.000E+00	-0.156
AG-110m	-2.346E+00	3.224E+00	5.073E+00	0.000E+00	-0.462
SN-113	2.720E+00	4.331E+00	7.297E+00	0.000E+00	0.373
SB-124	-2.578E+00	8.703E+00	5.789E+00	0.000E+00	-0.445
SB-125	-9.059E+00	9.135E+00	1.442E+01	0.000E+00	-0.628
TE-129M	-9.958E-01	4.403E+01	7.293E+01	0.000E+00	-0.014
I-131	1.034E+01	1.023E+01	1.764E+01	0.000E+00	0.586
BA-133	2.588E+00	4.859E+00	7.039E+00	0.000E+00	0.368
CS-134	1.894E+00	5.605E+00	5.749E+00	0.000E+00	0.330
CS-136	-7.371E-01	6.437E+00	1.038E+01	0.000E+00	-0.071
CS-137	1.477E+00	3.380E+00	5.764E+00	0.000E+00	0.256
CE-139	-1.362E-02	2.920E+00	4.863E+00	0.000E+00	-0.003
BA-140	-1.986E+00	2.254E+01	3.674E+01	0.000E+00	-0.054
LA-140	-1.028E+01	7.900E+00	1.084E+01	0.000E+00	-0.948
CE-141	2.679E+00	7.261E+00	1.022E+01	0.000E+00	0.262
CE-144	-1.482E+01	2.441E+01	3.425E+01	0.000E+00	-0.433
EU-152	-1.219E+01	1.142E+01	1.527E+01	0.000E+00	-0.798
EU-154	1.314E+00	5.665E+00	9.313E+00	0.000E+00	0.141
AC-228	1.095E+01	1.283E+01	2.249E+01	0.000E+00	0.487
TH-232	1.090E+01	1.277E+01	2.238E+01	0.000E+00	0.487
U-235	3.576E+00	2.527E+01	3.517E+01	0.000E+00	0.102
U-238	1.647E+01	3.623E+02	5.963E+02	0.000E+00	0.028
AM-241	-8.510E+00	3.047E+01	4.721E+01	0.000E+00	-0.180

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A,04L28851-12     ,06/13/2006 16:29,05/30/2006 15:15,   3.075E+00,WG L28851-12 D
B,04L28851-12     ,LIBD                ,06/13/2006 09:42,043L082004
C,RA-226  ,YES,   3.973E+01,   7.860E+01,   1.147E+02,,     0.346
C,TH-228  ,YES,   3.031E+00,   6.042E+00,   9.014E+00,,     0.336
C,BE-7    ,NO ,   1.277E+01,   2.997E+01,   5.083E+01,,     0.251
C,K-40    ,NO ,   5.617E+00,   4.409E+01,   8.179E+01,,     0.069
C,CR-51   ,NO ,  -9.061E+00,   3.618E+01,   5.910E+01,,    -0.153
C,MN-54   ,NO ,  -2.061E+00,   3.100E+00,   4.743E+00,,    -0.435
C,CO-57   ,NO ,   3.976E-01,   2.777E+00,   4.553E+00,,     0.087
C,CO-58   ,NO ,   1.536E+00,   3.569E+00,   6.012E+00,,     0.256
C,FE-59   ,NO ,   3.897E+00,   7.967E+00,   1.350E+01,,     0.289
C,CO-60   ,NO ,   1.050E+00,   3.756E+00,   6.269E+00,,     0.167
C,ZN-65   ,NO ,   3.021E+00,   7.045E+00,   1.212E+01,,     0.249
C,SE-75   ,NO ,  -2.503E+00,   4.386E+00,   6.912E+00,,    -0.362
C,SR-85   ,NO ,   1.920E+01,   4.330E+00,   8.437E+00,,     2.276
C,Y-88    ,NO ,  -1.209E+00,   4.122E+00,   6.564E+00,,    -0.184
C,NB-94   ,NO ,   3.234E-01,   3.070E+00,   5.097E+00,,     0.063
C,NB-95   ,NO ,   1.316E+00,   3.260E+00,   5.512E+00,,     0.239
C,ZR-95   ,NO ,  -1.656E+00,   6.077E+00,   9.739E+00,,    -0.170
C,MO-99   ,NO ,  -3.377E+02,   7.519E+02,   1.190E+03,,    -0.284
C,RU-103  ,NO ,   5.984E-01,   3.955E+00,   6.581E+00,,     0.091
C,RU-106  ,NO ,  -7.860E+00,   3.220E+01,   5.051E+01,,    -0.156
C,AG-110m ,NO ,  -2.346E+00,   3.224E+00,   5.073E+00,,    -0.462
C,SN-113  ,NO ,   2.720E+00,   4.331E+00,   7.297E+00,,     0.373
C,SB-124  ,NO ,  -2.578E+00,   8.703E+00,   5.789E+00,,    -0.445
C,SB-125  ,NO ,  -9.059E+00,   9.135E+00,   1.442E+01,,    -0.628
C,TE-129M ,NO ,  -9.958E-01,   4.403E+01,   7.293E+01,,    -0.014
C,I-131   ,NO ,   1.034E+01,   1.023E+01,   1.764E+01,,     0.586
C,BA-133  ,NO ,   2.588E+00,   4.859E+00,   7.039E+00,,     0.368
C,CS-134  ,NO ,   1.894E+00,   5.605E+00,   5.749E+00,,     0.330
C,CS-136  ,NO ,  -7.371E-01,   6.437E+00,   1.038E+01,,    -0.071
C,CS-137  ,NO ,   1.477E+00,   3.380E+00,   5.764E+00,,     0.256
C,CE-139  ,NO ,  -1.362E-02,   2.920E+00,   4.863E+00,,    -0.003
C,BA-140  ,NO ,  -1.986E+00,   2.254E+01,   3.674E+01,,    -0.054
C,LA-140  ,NO ,  -1.028E+01,   7.900E+00,   1.084E+01,,    -0.948
C,CE-141  ,NO ,   2.679E+00,   7.261E+00,   1.022E+01,,     0.262
C,CE-144  ,NO ,  -1.482E+01,   2.441E+01,   3.425E+01,,    -0.433
C,EU-152  ,NO ,  -1.219E+01,   1.142E+01,   1.527E+01,,    -0.798
C,EU-154  ,NO ,   1.314E+00,   5.665E+00,   9.313E+00,,     0.141
C,AC-228  ,NO ,   1.095E+01,   1.283E+01,   2.249E+01,,     0.487
C,TH-232  ,NO ,   1.090E+01,   1.277E+01,   2.238E+01,,     0.487
C,U-235   ,NO ,   3.576E+00,   2.527E+01,   3.517E+01,,     0.102
C,U-238   ,NO ,   1.647E+01,   3.623E+02,   5.963E+02,,     0.028
C,AM-241  ,NO ,  -8.510E+00,   3.047E+01,   4.721E+01,,    -0.180
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 15:55:18.11
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 13-JUN-2006 13:29:52.18

LIMS No., Customer Name, Client ID: WG L28751-13 DRESDEN

Sample ID : 07L28851-13
Sample Type : WG
Quantity : 3.20040E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 17:20:00.
Geometry : 073L082504
BKGFILE : 07BG060306MT
Real Time : 0 02:25:17.99
Live time : 0 02:25:16.33

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.72*	116	280	2.19	134.02	8.21E-01	1.33E-02	31.8	3.02E+00
2	1	139.91*	65	230	1.10	280.51	2.36E+00	7.48E-03	45.5	2.41E-01
3	1	198.22*	69	195	2.54	397.21	2.25E+00	7.89E-03	43.8	1.98E+00
4	1	1461.09*	26	13	2.37	2923.16	5.83E-01	2.94E-03	54.1	9.21E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	26	10.67*	5.827E-01	3.998E+01	3.998E+01	108.17

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28851-13

Acquisition date : 13-JUN-2006 13:29:52

Total number of lines in spectrum	4	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	1	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.998E+01	3.998E+01	4.325E+01	108.17	
	Total Activity :		3.998E+01	3.998E+01			
	Grand Total Activity :		3.998E+01	3.998E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28851-13

Acquisition date : 13-JUN-2006 13:29:52

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.72	116	280	2.19	134.02	129	12	1.33E-02	63.6	8.21E-01	
1	139.91	65	230	1.10	280.51	276	9	7.48E-03	90.9	2.36E+00	
1	198.22	69	195	2.54	397.21	392	11	7.89E-03	87.7	2.25E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	4	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	1	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.998E+01	3.998E+01	4.325E+01	108.17	
	Total Activity :		3.998E+01	3.998E+01			
	Grand Total Activity :		3.998E+01	3.998E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.998E+01	4.325E+01	5.207E+01	0.000E+00	0.768

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-8.439E+00		2.905E+01	4.645E+01	0.000E+00	-0.182
NA-24	-4.177E+00		6.819E+00	Half-Life too short		
CR-51	-3.765E+01		3.330E+01	5.244E+01	0.000E+00	-0.718
MN-54	3.251E+00		2.883E+00	5.167E+00	0.000E+00	0.629
CO-57	1.097E+00		2.924E+00	4.843E+00	0.000E+00	0.226
CO-58	-3.257E+00		3.175E+00	4.821E+00	0.000E+00	-0.676
FE-59	-1.041E-01		6.699E+00	1.108E+01	0.000E+00	-0.009
CO-60	-1.833E+00		3.143E+00	4.818E+00	0.000E+00	-0.381

ZN-65	3.498E+00	6.696E+00	1.154E+01	0.000E+00	0.303
SE-75	1.761E+00	4.187E+00	6.962E+00	0.000E+00	0.253
SR-85	1.954E+01	4.134E+00	8.145E+00	0.000E+00	2.399
Y-88	-6.314E-01	3.216E+00	5.187E+00	0.000E+00	-0.122
NB-94	-2.487E+00	3.130E+00	4.837E+00	0.000E+00	-0.514
NB-95	-6.581E-01	3.453E+00	5.663E+00	0.000E+00	-0.116
ZR-95	-1.320E+00	6.137E+00	9.805E+00	0.000E+00	-0.135
MO-99	-2.665E+02	7.362E+02	1.164E+03	0.000E+00	-0.229
RU-103	1.105E+00	3.942E+00	6.508E+00	0.000E+00	0.170
RU-106	-1.152E+00	2.814E+01	4.616E+01	0.000E+00	-0.025
AG-110m	2.229E+00	2.905E+00	5.018E+00	0.000E+00	0.444
SN-113	2.674E-02	4.168E+00	6.867E+00	0.000E+00	0.004
SB-124	-6.480E+00	3.852E+00	5.736E+00	0.000E+00	-1.130
SB-125	1.114E+00	8.426E+00	1.391E+01	0.000E+00	0.080
TE-129M	1.542E+01	4.341E+01	7.233E+01	0.000E+00	0.213
I-131	-2.312E+00	9.534E+00	1.557E+01	0.000E+00	-0.149
BA-133	4.002E+00	4.232E+00	7.310E+00	0.000E+00	0.547
CS-134	-9.953E-01	3.309E+00	5.361E+00	0.000E+00	-0.186
CS-136	8.670E+00	5.617E+00	1.037E+01	0.000E+00	0.836
CS-137	3.022E+00	3.056E+00	5.360E+00	0.000E+00	0.564
CE-139	-4.368E-01	2.949E+00	4.894E+00	0.000E+00	-0.089
BA-140	-1.493E+00	2.143E+01	3.542E+01	0.000E+00	-0.042
LA-140	1.057E+00	7.157E+00	1.195E+01	0.000E+00	0.088
CE-141	8.483E-01	7.428E+00	1.031E+01	0.000E+00	0.082
CE-144	3.955E+00	2.548E+01	3.560E+01	0.000E+00	0.111
EU-152	-1.066E+01	9.417E+00	1.478E+01	0.000E+00	-0.721
EU-154	2.806E+00	5.992E+00	9.955E+00	0.000E+00	0.282
RA-226	-4.984E+01	7.234E+01	1.188E+02	0.000E+00	-0.420
AC-228	4.996E+00	1.194E+01	2.035E+01	0.000E+00	0.246
TH-228	-1.243E-02	5.715E+00	9.553E+00	0.000E+00	-0.001
TH-232	4.973E+00	1.189E+01	2.025E+01	0.000E+00	0.246
U-235	2.820E+01	2.523E+01	3.695E+01	0.000E+00	0.763
U-238	9.817E+01	3.135E+02	5.258E+02	0.000E+00	0.187
AM-241	1.717E+01	2.989E+01	4.423E+01	0.000E+00	0.388

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A,07L28851-13      ,06/13/2006 15:55,05/30/2006 17:20,   3.200E+00,WG L28751-13 D
B,07L28851-13      ,LIBD                ,06/07/2006 09:32,073L082504
C,K-40     ,YES,    3.998E+01,   4.325E+01,   5.207E+01,,    0.768
C,BE-7     ,NO ,   -8.439E+00,   2.905E+01,   4.645E+01,,   -0.182
C,CR-51    ,NO ,   -3.765E+01,   3.330E+01,   5.244E+01,,   -0.718
C,MN-54    ,NO ,    3.251E+00,   2.883E+00,   5.167E+00,,    0.629
C,CO-57    ,NO ,    1.097E+00,   2.924E+00,   4.843E+00,,    0.226
C,CO-58    ,NO ,   -3.257E+00,   3.175E+00,   4.821E+00,,   -0.676
C,FE-59    ,NO ,   -1.041E-01,   6.699E+00,   1.108E+01,,   -0.009
C,CO-60    ,NO ,   -1.833E+00,   3.143E+00,   4.818E+00,,   -0.381
C,ZN-65    ,NO ,    3.498E+00,   6.696E+00,   1.154E+01,,    0.303
C,SE-75    ,NO ,    1.761E+00,   4.187E+00,   6.962E+00,,    0.253
C,SR-85    ,NO ,    1.954E+01,   4.134E+00,   8.145E+00,,    2.399
C,Y-88     ,NO ,   -6.314E-01,   3.216E+00,   5.187E+00,,   -0.122
C,NB-94    ,NO ,   -2.487E+00,   3.130E+00,   4.837E+00,,   -0.514
C,NB-95    ,NO ,   -6.581E-01,   3.453E+00,   5.663E+00,,   -0.116
C,ZR-95    ,NO ,   -1.320E+00,   6.137E+00,   9.805E+00,,   -0.135
C,MO-99    ,NO ,   -2.665E+02,   7.362E+02,   1.164E+03,,   -0.229
C,RU-103   ,NO ,    1.105E+00,   3.942E+00,   6.508E+00,,    0.170
C,RU-106   ,NO ,   -1.152E+00,   2.814E+01,   4.616E+01,,   -0.025
C,AG-110m  ,NO ,    2.229E+00,   2.905E+00,   5.018E+00,,    0.444
C,SN-113   ,NO ,    2.674E-02,   4.168E+00,   6.867E+00,,    0.004
C,SB-124   ,NO ,   -6.480E+00,   3.852E+00,   5.736E+00,,   -1.130
C,SB-125   ,NO ,    1.114E+00,   8.426E+00,   1.391E+01,,    0.080
C,TE-129M  ,NO ,    1.542E+01,   4.341E+01,   7.233E+01,,    0.213
C,I-131    ,NO ,   -2.312E+00,   9.534E+00,   1.557E+01,,   -0.149
C,BA-133   ,NO ,    4.002E+00,   4.232E+00,   7.310E+00,,    0.547
C,CS-134   ,NO ,   -9.953E-01,   3.309E+00,   5.361E+00,,   -0.186
C,CS-136   ,NO ,    8.670E+00,   5.617E+00,   1.037E+01,,    0.836
C,CS-137   ,NO ,    3.022E+00,   3.056E+00,   5.360E+00,,    0.564
C,CE-139   ,NO ,   -4.368E-01,   2.949E+00,   4.894E+00,,   -0.089
C,BA-140   ,NO ,   -1.493E+00,   2.143E+01,   3.542E+01,,   -0.042
C,LA-140   ,NO ,    1.057E+00,   7.157E+00,   1.195E+01,,    0.088
C,CE-141   ,NO ,    8.483E-01,   7.428E+00,   1.031E+01,,    0.082
C,CE-144   ,NO ,    3.955E+00,   2.548E+01,   3.560E+01,,    0.111
C,EU-152   ,NO ,   -1.066E+01,   9.417E+00,   1.478E+01,,   -0.721
C,EU-154   ,NO ,    2.806E+00,   5.992E+00,   9.955E+00,,    0.282
C,RA-226   ,NO ,   -4.984E+01,   7.234E+01,   1.188E+02,,   -0.420
C,AC-228   ,NO ,    4.996E+00,   1.194E+01,   2.035E+01,,    0.246
C,TH-228   ,NO ,   -1.243E-02,   5.715E+00,   9.553E+00,,   -0.001
C,TH-232   ,NO ,    4.973E+00,   1.189E+01,   2.025E+01,,    0.246
C,U-235    ,NO ,    2.820E+01,   2.523E+01,   3.695E+01,,    0.763
C,U-238    ,NO ,    9.817E+01,   3.135E+02,   5.258E+02,,    0.187
C,AM-241   ,NO ,    1.717E+01,   2.989E+01,   4.423E+01,,    0.388
```

Sec. Review: Analyst: KW LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 18:35:51.30
TBE23 03017322 HpGe ********** Aquisition Date/Time: 13-JUN-2006 14:21:02.99

LIMS No., Customer Name, Client ID: WG L28851-14 DRESDEN

Sample ID : 23L28851-14
Sample Type : WG
Quantity : 3.15880E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 10:15:00.
Geometry : 233L082404
BKGFILE : 23BG060306MT
Real Time : 0 04:14:39.93
Live time : 0 04:14:29.36

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	6	33.64*	54	12	1.10	67.61	8.04E-02	3.52E-03	34.0	5.64E+00
2	6	35.36*	48	115	2.13	71.04	1.08E-01	3.15E-03	80.3	
3	6	37.90*	17	222	2.14	76.12	1.57E-01	1.10E-03	241.7	
4	3	63.22*	113	566	1.66	126.72	1.04E+00	7.40E-03	43.9	2.11E+00
5	3	66.26	130	472	1.42	132.79	1.16E+00	8.52E-03	30.4	
6	0	92.74*	57	771	1.36	185.72	1.94E+00	3.71E-03	104.2	
7	0	139.91*	57	624	1.15	279.99	2.32E+00	3.74E-03	84.4	
8	0	198.57*	69	354	1.42	397.23	2.11E+00	4.50E-03	53.0	
9	0	238.33*	18	284	0.91	476.70	1.90E+00	1.19E-03	186.6	
10	0	595.55	79	78	1.85	1190.79	9.56E-01	5.19E-03	24.2	
11	0	1001.62*	25	35	1.09	2002.76	6.64E-01	1.67E-03	52.7	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	18	44.60*	1.902E+00	1.205E+00	1.221E+00	373.16
	240.98	------	3.95	1.888E+00	------	Line Not Found	------
U-238	766.41	------	0.21	7.978E-01	------	Line Not Found	------
	1001.03	25	0.92*	6.643E-01	2.338E+02	2.338E+02	105.45

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28851-14 Acquisition date : 13-JUN-2006 14:21:02

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.01	1.205E+00	1.221E+00	4.558E+00	373.16	
U-238	4.47E+09Y	1.00	2.338E+02	2.338E+02	2.465E+02	105.45	
	Total Activity :		2.350E+02	2.350E+02			
	Grand Total Activity :		2.350E+02	2.350E+02			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28851-14 Acquisition date : 13-JUN-2006 14:21:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	33.64	54	12	1.10	67.61	65	24	3.52E-03	67.9	8.04E-02	
6	35.36	48	115	2.13	71.04	65	24	3.15E-03	****	1.08E-01	
6	37.90	17	222	2.14	76.12	65	24	1.10E-03	****	1.57E-01	
3	63.22	113	566	1.66	126.72	120	18	7.40E-03	87.8	1.04E+00	
3	66.26	130	472	1.42	132.79	120	18	8.52E-03	60.8	1.16E+00	
0	92.74	57	771	1.36	185.72	180	11	3.71E-03	****	1.94E+00	
0	139.91	57	624	1.15	279.99	276	9	3.74E-03	****	2.32E+00	
0	198.57	69	354	1.42	397.23	393	8	4.50E-03	****	2.11E+00	
0	595.55	79	78	1.85	1190.79	1186	11	5.19E-03	48.4	9.56E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.01	1.205E+00	1.221E+00	4.558E+00	373.16	
U-238	4.47E+09Y	1.00	2.338E+02	2.338E+02	2.465E+02	105.45	
	Total Activity :		2.350E+02	2.350E+02			
	Grand Total Activity :		2.350E+02	2.350E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	1.221E+00	4.558E+00	8.096E+00	0.000E+00	0.151
U-238	2.338E+02	2.465E+02	4.565E+02	0.000E+00	0.512

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-8.090E+00	2.439E+01	4.073E+01	0.000E+00	-0.199
NA-24	-3.568E+00	3.276E+00	Half-Life too short		
K-40	-2.209E+01	3.778E+01	7.377E+01	0.000E+00	-0.299
CR-51	-3.393E+01	2.929E+01	4.796E+01	0.000E+00	-0.708
MN-54	2.069E+00	2.510E+00	4.527E+00	0.000E+00	0.457
CO-57	-9.658E-01	2.803E+00	4.674E+00	0.000E+00	-0.207
CO-58	-6.358E-01	2.766E+00	4.702E+00	0.000E+00	-0.135
FE-59	1.682E+00	5.249E+00	9.423E+00	0.000E+00	0.178
CO-60	1.822E+00	2.435E+00	4.523E+00	0.000E+00	0.403
ZN-65	2.218E+00	5.148E+00	9.279E+00	0.000E+00	0.239
SE-75	-9.656E-01	3.840E+00	6.507E+00	0.000E+00	-0.148
SR-85	1.387E+01	3.329E+00	6.386E+00	0.000E+00	2.171
Y-88	-1.408E+00	2.976E+00	5.067E+00	0.000E+00	-0.278
NB-94	1.765E+00	2.395E+00	4.288E+00	0.000E+00	0.412
NB-95	3.301E+00	2.875E+00	5.246E+00	0.000E+00	0.629
ZR-95	-1.228E+00	5.027E+00	8.551E+00	0.000E+00	-0.144
MO-99	3.782E+02	5.315E+02	9.512E+02	0.000E+00	0.398
RU-103	-2.238E-01	3.300E+00	5.561E+00	0.000E+00	-0.040
RU-106	9.832E+00	2.328E+01	4.120E+01	0.000E+00	0.239
AG-110m	1.488E-01	2.509E+00	4.355E+00	0.000E+00	0.034
SN-113	2.996E+00	3.448E+00	6.063E+00	0.000E+00	0.494
SB-124	-7.044E+00	3.913E+00	5.026E+00	0.000E+00	-1.401
SB-125	2.491E+00	7.381E+00	1.270E+01	0.000E+00	0.196
TE-129M	4.688E+00	3.637E+01	6.206E+01	0.000E+00	0.076
I-131	7.952E-01	8.213E+00	1.401E+01	0.000E+00	0.057
BA-133	-2.897E-01	3.632E+00	6.157E+00	0.000E+00	-0.047
CS-134	5.854E+00	2.993E+00	5.007E+00	0.000E+00	1.169
CS-136	-4.219E-04	4.642E+00	8.016E+00	0.000E+00	0.000
CS-137	-2.298E-01	2.721E+00	4.686E+00	0.000E+00	-0.049
CE-139	-3.529E-01	2.885E+00	4.804E+00	0.000E+00	-0.073
BA-140	8.460E+00	1.788E+01	3.099E+01	0.000E+00	0.273
LA-140	2.732E+00	5.412E+00	1.007E+01	0.000E+00	0.271
CE-141	8.845E-01	7.108E+00	1.014E+01	0.000E+00	0.087
CE-144	6.073E+00	2.580E+01	3.699E+01	0.000E+00	0.164
EU-152	-7.595E+00	8.443E+00	1.392E+01	0.000E+00	-0.546
EU-154	-5.663E+00	5.770E+00	9.492E+00	0.000E+00	-0.597
RA-226	3.380E+01	7.467E+01	1.211E+02	0.000E+00	0.279
AC-228	-1.266E+00	9.941E+00	1.561E+01	0.000E+00	-0.081
TH-232	-1.260E+00	9.898E+00	1.554E+01	0.000E+00	-0.081
U-235	8.067E+00	2.591E+01	3.642E+01	0.000E+00	0.222
AM-241	2.169E+01	1.765E+01	2.581E+01	0.000E+00	0.840

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A,23L28851-14      ,06/13/2006 18:35,05/31/2006 10:15,   3.159E+00,WG L28851-14 D
B,23L28851-14      ,LIBD                ,06/01/2006 10:14,233L082404
C,TH-228   ,YES,    1.221E+00,    4.558E+00,    8.096E+00,,     0.151
C,U-238    ,YES,    2.338E+02,    2.465E+02,    4.565E+02,,     0.512
C,BE-7     ,NO ,   -8.090E+00,    2.439E+01,    4.073E+01,,    -0.199
C,K-40     ,NO ,   -2.209E+01,    3.778E+01,    7.377E+01,,    -0.299
C,CR-51    ,NO ,   -3.393E+01,    2.929E+01,    4.796E+01,,    -0.708
C,MN-54    ,NO ,    2.069E+00,    2.510E+00,    4.527E+00,,     0.457
C,CO-57    ,NO ,   -9.658E-01,    2.803E+00,    4.674E+00,,    -0.207
C,CO-58    ,NO ,   -6.358E-01,    2.766E+00,    4.702E+00,,    -0.135
C,FE-59    ,NO ,    1.682E+00,    5.249E+00,    9.423E+00,,     0.178
C,CO-60    ,NO ,    1.822E+00,    2.435E+00,    4.523E+00,,     0.403
C,ZN-65    ,NO ,    2.218E+00,    5.148E+00,    9.279E+00,,     0.239
C,SE-75    ,NO ,   -9.656E-01,    3.840E+00,    6.507E+00,,    -0.148
C,SR-85    ,NO ,    1.387E+01,    3.329E+00,    6.386E+00,,     2.171
C,Y-88     ,NO ,   -1.408E+00,    2.976E+00,    5.067E+00,,    -0.278
C,NB-94    ,NO ,    1.765E+00,    2.395E+00,    4.288E+00,,     0.412
C,NB-95    ,NO ,    3.301E+00,    2.875E+00,    5.246E+00,,     0.629
C,ZR-95    ,NO ,   -1.228E+00,    5.027E+00,    8.551E+00,,    -0.144
C,MO-99    ,NO ,    3.782E+02,    5.315E+02,    9.512E+02,,     0.398
C,RU-103   ,NO ,   -2.238E-01,    3.300E+00,    5.561E+00,,    -0.040
C,RU-106   ,NO ,    9.832E+00,    2.328E+01,    4.120E+01,,     0.239
C,AG-110m  ,NO ,    1.488E-01,    2.509E+00,    4.355E+00,,     0.034
C,SN-113   ,NO ,    2.996E+00,    3.448E+00,    6.063E+00,,     0.494
C,SB-124   ,NO ,   -7.044E+00,    3.913E+00,    5.026E+00,,    -1.401
C,SB-125   ,NO ,    2.491E+00,    7.381E+00,    1.270E+01,,     0.196
C,TE-129M  ,NO ,    4.688E+00,    3.637E+01,    6.206E+01,,     0.076
C,I-131    ,NO ,    7.952E-01,    8.213E+00,    1.401E+01,,     0.057
C,BA-133   ,NO ,   -2.897E-01,    3.632E+00,    6.157E+00,,    -0.047
C,CS-134   ,NO ,    5.854E+00,    2.993E+00,    5.007E+00,,     1.169
C,CS-136   ,NO ,   -4.219E-04,    4.642E+00,    8.016E+00,,     0.000
C,CS-137   ,NO ,   -2.298E-01,    2.721E+00,    4.686E+00,,    -0.049
C,CE-139   ,NO ,   -3.529E-01,    2.885E+00,    4.804E+00,,    -0.073
C,BA-140   ,NO ,    8.460E+00,    1.788E+01,    3.099E+01,,     0.273
C,LA-140   ,NO ,    2.732E+00,    5.412E+00,    1.007E+01,,     0.271
C,CE-141   ,NO ,    8.845E-01,    7.108E+00,    1.014E+01,,     0.087
C,CE-144   ,NO ,    6.073E+00,    2.580E+01,    3.699E+01,,     0.164
C,EU-152   ,NO ,   -7.595E+00,    8.443E+00,    1.392E+01,,    -0.546
C,EU-154   ,NO ,   -5.663E+00,    5.770E+00,    9.492E+00,,    -0.597
C,RA-226   ,NO ,    3.380E+01,    7.467E+01,    1.211E+02,,     0.279
C,AC-228   ,NO ,   -1.266E+00,    9.941E+00,    1.561E+01,,    -0.081
C,TH-232   ,NO ,   -1.260E+00,    9.898E+00,    1.554E+01,,    -0.081
C,U-235    ,NO ,    8.067E+00,    2.591E+01,    3.642E+01,,     0.222
C,AM-241   ,NO ,    2.169E+01,    1.765E+01,    2.581E+01,,     0.840
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 00:11:36.10
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 13-JUN-2006 15:52:28.90

LIMS No., Customer Name, Client ID: WG L28851-15 DRESDEN

Sample ID : 15L28851-15
Sample Type : WG
Quantity : 3.31770E+00 L
Start Channel : 40 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 10:25:00.
Geometry : 1535L090104
BKGFILE : 15BG060306MT
Real Time : 0 07:25:36.43
Live time : 0 07:25:33.74

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	139.73	151	740	1.36	267.74	1.48E+00	5.66E-03	33.4	5.36E-01
2	1	197.80	138	523	1.52	384.52	1.37E+00	5.17E-03	30.2	1.64E+00
3	1	350.68*	91	299	2.45	691.91	9.18E-01	3.42E-03	42.6	8.30E-01
4	1	594.79	123	163	0.78	1182.64	5.98E-01	4.61E-03	21.7	1.77E+01
5	1	608.11	145	179	3.04	1209.41	5.87E-01	5.41E-03	22.9	2.20E+00
6	1	1457.78	170	58	2.22	2916.14	2.91E-01	6.36E-03	13.2	2.21E+00
7	1	1761.52	32	39	2.17	3525.80	2.54E-01	1.19E-03	44.7	1.32E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 15L28851-15 Acquisition date : 13-JUN-2006 15:52:28

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 15L28851-15 Acquisition date : 13-JUN-2006 15:52:28

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	139.73	151	740	1.36	267.74	263	9	5.66E-03	66.7	1.48E+00	
1	197.80	138	523	1.52	384.52	381	8	5.17E-03	60.4	1.37E+00	
1	350.68	91	299	2.45	691.91	687	11	3.42E-03	85.3	9.18E-01	
1	594.79	123	163	0.78	1182.64	1178	11	4.61E-03	43.4	5.98E-01	
1	608.11	145	179	3.04	1209.41	1202	17	5.41E-03	45.8	5.87E-01	
1	1457.78	170	58	2.22	2916.14	2907	18	6.36E-03	26.4	2.91E-01	
1	1761.52	32	39	2.17	3525.80	3517	14	1.19E-03	89.3	2.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 7
Number of unidentified lines 7
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	8.712E+00		2.518E+01	4.242E+01	0.000E+00	0.205
NA-24	-2.450E+00		4.063E+00	Half-Life too short		
K-40	1.201E+02		4.419E+01	7.284E+01	0.000E+00	1.648
CR-51	-2.686E+01		2.881E+01	4.631E+01	0.000E+00	-0.580
MN-54	2.723E-02		2.568E+00	4.231E+00	0.000E+00	0.006
CO-57	-2.023E+00		2.633E+00	3.997E+00	0.000E+00	-0.506
CO-58	-2.308E+00		2.937E+00	4.651E+00	0.000E+00	-0.496
FE-59	4.027E-01		5.838E+00	9.692E+00	0.000E+00	0.042
CO-60	4.305E-01		2.824E+00	4.651E+00	0.000E+00	0.093
ZN-65	8.650E+00		5.702E+00	1.023E+01	0.000E+00	0.845
SE-75	-3.566E-02		3.555E+00	5.742E+00	0.000E+00	-0.006
SR-85	3.830E+00		3.406E+00	5.828E+00	0.000E+00	0.657
Y-88	-9.777E-01		3.140E+00	5.062E+00	0.000E+00	-0.193
NB-94	-5.476E-01		2.582E+00	4.148E+00	0.000E+00	-0.132
NB-95	9.664E-01		2.930E+00	4.930E+00	0.000E+00	0.196
ZR-95	8.033E-01		5.312E+00	8.870E+00	0.000E+00	0.091
MO-99	-7.018E+01		5.753E+02	9.498E+02	0.000E+00	-0.074
RU-103	-4.183E-01		3.204E+00	5.292E+00	0.000E+00	-0.079
RU-106	1.267E+01		2.411E+01	4.042E+01	0.000E+00	0.314
AG-110m	1.195E+00		2.694E+00	4.482E+00	0.000E+00	0.267
SN-113	-2.768E+00		3.540E+00	5.627E+00	0.000E+00	-0.492

SB-124	4.618E+00	5.863E+00	4.892E+00	0.000E+00	0.944
SB-125	-2.480E+00	7.509E+00	1.206E+01	0.000E+00	-0.206
TE-129M	1.306E+01	3.867E+01	6.343E+01	0.000E+00	0.206
I-131	1.339E+00	8.048E+00	1.329E+01	0.000E+00	0.101
BA-133	-2.322E-01	4.076E+00	5.670E+00	0.000E+00	-0.041
CS-134	3.558E+00	3.988E+00	4.664E+00	0.000E+00	0.763
CS-136	2.638E+00	5.053E+00	8.558E+00	0.000E+00	0.308
CS-137	-3.053E+00	2.939E+00	4.554E+00	0.000E+00	-0.670
CE-139	-7.673E-01	2.506E+00	4.115E+00	0.000E+00	-0.186
BA-140	-5.913E+00	1.841E+01	3.001E+01	0.000E+00	-0.197
LA-140	-4.147E+00	6.361E+00	9.907E+00	0.000E+00	-0.419
CE-141	3.061E+00	6.016E+00	8.693E+00	0.000E+00	0.352
CE-144	1.102E+01	2.188E+01	3.174E+01	0.000E+00	0.347
EU-152	-8.242E+00	9.335E+00	1.250E+01	0.000E+00	-0.659
EU-154	-3.888E+00	5.369E+00	8.153E+00	0.000E+00	-0.477
RA-226	-4.892E+01	6.739E+01	1.012E+02	0.000E+00	-0.483
AC-228	6.582E+00	9.712E+00	1.647E+01	0.000E+00	0.400
TH-228	3.064E+00	5.253E+00	8.017E+00	0.000E+00	0.382
TH-232	6.553E+00	9.669E+00	1.640E+01	0.000E+00	0.400
U-235	2.729E+01	2.089E+01	3.092E+01	0.000E+00	0.883
U-238	9.526E+01	3.051E+02	5.047E+02	0.000E+00	0.189
AM-241	-5.290E+01	2.938E+01	4.678E+01	0.000E+00	-1.131

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A,15L28851-15     ,06/14/2006 00:11,05/31/2006 10:25,   3.318E+00,WG L28851-15 D
B,15L28851-15     ,LIBD                ,06/06/2006 10:43,1535L090104
C,BE-7    ,NO ,   8.712E+00,   2.518E+01,   4.242E+01,,    0.205
C,K-40    ,NO ,   1.201E+02,   4.419E+01,   7.284E+01,,    1.648
C,CR-51   ,NO ,  -2.686E+01,   2.881E+01,   4.631E+01,,   -0.580
C,MN-54   ,NO ,   2.723E-02,   2.568E+00,   4.231E+00,,    0.006
C,CO-57   ,NO ,  -2.023E+00,   2.633E+00,   3.997E+00,,   -0.506
C,CO-58   ,NO ,  -2.308E+00,   2.937E+00,   4.651E+00,,   -0.496
C,FE-59   ,NO ,   4.027E-01,   5.838E+00,   9.692E+00,,    0.042
C,CO-60   ,NO ,   4.305E-01,   2.824E+00,   4.651E+00,,    0.093
C,ZN-65   ,NO ,   8.650E+00,   5.702E+00,   1.023E+01,,    0.845
C,SE-75   ,NO ,  -3.566E-02,   3.555E+00,   5.742E+00,,   -0.006
C,SR-85   ,NO ,   3.830E+00,   3.406E+00,   5.828E+00,,    0.657
C,Y-88    ,NO ,  -9.777E-01,   3.140E+00,   5.062E+00,,   -0.193
C,NB-94   ,NO ,  -5.476E-01,   2.582E+00,   4.148E+00,,   -0.132
C,NB-95   ,NO ,   9.664E-01,   2.930E+00,   4.930E+00,,    0.196
C,ZR-95   ,NO ,   8.033E-01,   5.312E+00,   8.870E+00,,    0.091
C,MO-99   ,NO ,  -7.018E+01,   5.753E+02,   9.498E+02,,   -0.074
C,RU-103  ,NO ,  -4.183E-01,   3.204E+00,   5.292E+00,,   -0.079
C,RU-106  ,NO ,   1.267E+01,   2.411E+01,   4.042E+01,,    0.314
C,AG-110m ,NO ,   1.195E+00,   2.694E+00,   4.482E+00,,    0.267
C,SN-113  ,NO ,  -2.768E+00,   3.540E+00,   5.627E+00,,   -0.492
C,SB-124  ,NO ,   4.618E+00,   5.863E+00,   4.892E+00,,    0.944
C,SB-125  ,NO ,  -2.480E+00,   7.509E+00,   1.206E+01,,   -0.206
C,TE-129M ,NO ,   1.306E+01,   3.867E+01,   6.343E+01,,    0.206
C,I-131   ,NO ,   1.339E+00,   8.048E+00,   1.329E+01,,    0.101
C,BA-133  ,NO ,  -2.322E-01,   4.076E+00,   5.670E+00,,   -0.041
C,CS-134  ,NO ,   3.558E+00,   3.988E+00,   4.664E+00,,    0.763
C,CS-136  ,NO ,   2.638E+00,   5.053E+00,   8.558E+00,,    0.308
C,CS-137  ,NO ,  -3.053E+00,   2.939E+00,   4.554E+00,,   -0.670
C,CE-139  ,NO ,  -7.673E-01,   2.506E+00,   4.115E+00,,   -0.186
C,BA-140  ,NO ,  -5.913E+00,   1.841E+01,   3.001E+01,,   -0.197
C,LA-140  ,NO ,  -4.147E+00,   6.361E+00,   9.907E+00,,   -0.419
C,CE-141  ,NO ,   3.061E+00,   6.016E+00,   8.693E+00,,    0.352
C,CE-144  ,NO ,   1.102E+01,   2.188E+01,   3.174E+01,,    0.347
C,EU-152  ,NO ,  -8.242E+00,   9.335E+00,   1.250E+01,,   -0.659
C,EU-154  ,NO ,  -3.888E+00,   5.369E+00,   8.153E+00,,   -0.477
C,RA-226  ,NO ,  -4.892E+01,   6.739E+01,   1.012E+02,,   -0.483
C,AC-228  ,NO ,   6.582E+00,   9.712E+00,   1.647E+01,,    0.400
C,TH-228  ,NO ,   3.064E+00,   5.253E+00,   8.017E+00,,    0.382
C,TH-232  ,NO ,   6.553E+00,   9.669E+00,   1.640E+01,,    0.400
C,U-235   ,NO ,   2.729E+01,   2.089E+01,   3.092E+01,,    0.883
C,U-238   ,NO ,   9.526E+01,   3.051E+02,   5.047E+02,,    0.189
C,AM-241  ,NO ,  -5.290E+01,   2.938E+01,   4.678E+01,,   -1.131
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 23:19:11.81
TBE23 03017322 HpGe ********** Aquisition Date/Time: 13-JUN-2006 18:37:19.67

LIMS No., Customer Name, Client ID: WG L28851-16 DRESDEN

Sample ID : 23L28851-16			Smple Date: 31-MAY-2006 11:45:00.
Sample Type : WG			Geometry : 233L082404
Quantity : 3.23880E+00 L			BKGFILE : 23BG060306MT
Start Channel : 50	Energy Tol : 1.50000		Real Time : 0 04:41:40.17
End Channel : 4090	Pk Srch Sens: 5.00000		Live time : 0 04:41:28.95
MDA Constant : 0.00	Library Used: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	6	33.80*	93	19	1.20	67.92	8.27E-02	5.53E-03	22.4	4.46E+00
2	6	35.34*	16	156	1.94	71.01	1.07E-01	9.34E-04	262.6	
3	6	38.30*	52	349	2.14	76.91	1.66E-01	3.11E-03	84.7	
4	0	92.72*	40	986	1.47	185.68	1.94E+00	2.35E-03	170.9	
5	0	139.50*	75	595	0.96	279.16	2.32E+00	4.47E-03	61.1	
6	0	185.53*	11	598	1.21	371.17	2.18E+00	6.62E-04	473.5	
7	0	198.36*	79	447	1.35	396.80	2.11E+00	4.67E-03	51.5	
8	0	238.21*	13	435	1.01	476.46	1.90E+00	7.82E-04	327.9	
9	0	351.77*	36	294	1.54	703.44	1.43E+00	2.13E-03	109.9	
10	0	583.88*	7	114	1.36	1167.46	9.70E-01	4.06E-04	342.8	
11	0	596.01	101	93	1.73	1191.71	9.56E-01	6.01E-03	20.9	
12	0	1103.92	26	32	1.42	2207.36	6.22E-01	1.54E-03	48.2	
13	0	1306.63	14	8	0.96	2612.82	5.53E-01	8.49E-04	40.2	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	11	3.28*	2.175E+00	7.745E+00	7.746E+00	947.06
TH-228	238.63	13	44.60*	1.902E+00	7.692E-01	7.794E-01	655.70
	240.98	------	3.95	1.888E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28851-16

Acquisition date : 13-JUN-2006 18:37:19

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	7.745E+00	7.746E+00	73.35E+00	947.06	
TH-228	1.91Y	1.01	7.692E-01	7.794E-01	51.11E-01	655.70	
	Total Activity :		8.515E+00	8.525E+00			
	Grand Total Activity :		8.515E+00	8.525E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28851-16

Acquisition date : 13-JUN-2006 18:37:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	33.80	93	19	1.20	67.92	65	22	5.53E-03	44.8	8.27E-02	
6	35.34	16	156	1.94	71.01	65	22	9.34E-04	****	1.07E-01	
6	38.30	52	349	2.14	76.91	65	22	3.11E-03	****	1.66E-01	
0	92.72	40	986	1.47	185.68	180	12	2.35E-03	****	1.94E+00	
0	139.50	75	595	0.96	279.16	276	8	4.47E-03	****	2.32E+00	
0	198.36	79	447	1.35	396.80	393	8	4.67E-03	****	2.11E+00	
0	351.77	36	294	1.54	703.44	697	14	2.13E-03	****	1.43E+00	
0	583.88	7	114	1.36	1167.46	1160	11	4.06E-04	****	9.70E-01	T
0	596.01	101	93	1.73	1191.71	1186	11	6.01E-03	41.9	9.56E-01	
0	1103.92	26	32	1.42	2207.36	2200	12	1.54E-03	96.4	6.22E-01	
0	1306.63	14	8	0.96	2612.82	2610	6	8.49E-04	80.4	5.53E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	7.745E+00	7.746E+00	73.35E+00	947.06	
TH-228	1.91Y	1.01	7.692E-01	7.794E-01	51.11E-01	655.70	
	Total Activity :		8.515E+00	8.525E+00			

Grand Total Activity : 8.515E+00 8.525E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	7.746E+00	7.335E+01	1.018E+02	0.000E+00	0.076
TH-228	7.794E-01	5.111E+00	7.358E+00	0.000E+00	0.106

---- Non-Identified Nuclides ----

	Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided	(pCi/L)		
BE-7	2.124E+01	2.318E+01	4.071E+01	0.000E+00	0.522
NA-24	6.177E-01	3.040E+00	Half-Life too short		
K-40	-4.177E+01	3.446E+01	6.545E+01	0.000E+00	-0.638
CR-51	-1.027E+01	2.858E+01	4.804E+01	0.000E+00	-0.214
MN-54	5.464E-01	2.390E+00	4.152E+00	0.000E+00	0.132
CO-57	-1.759E+00	2.615E+00	4.331E+00	0.000E+00	-0.406
CO-58	-1.679E+00	2.518E+00	4.166E+00	0.000E+00	-0.403
FE-59	-6.468E-01	6.428E+00	9.348E+00	0.000E+00	-0.069
CO-60	-1.357E+00	2.223E+00	3.704E+00	0.000E+00	-0.366
ZN-65	9.423E+00	4.888E+00	9.299E+00	0.000E+00	1.013
SE-75	-9.808E-01	3.493E+00	5.912E+00	0.000E+00	-0.166
SR-85	1.405E+01	3.050E+00	5.889E+00	0.000E+00	2.386
Y-88	3.074E+00	2.677E+00	5.215E+00	0.000E+00	0.589
NB-94	2.794E-01	2.232E+00	3.867E+00	0.000E+00	0.072
NB-95	1.202E+00	2.506E+00	4.428E+00	0.000E+00	0.271
ZR-95	-1.472E+00	4.576E+00	7.743E+00	0.000E+00	-0.190
MO-99	-1.796E+02	4.999E+02	8.446E+02	0.000E+00	-0.213
RU-103	2.901E+00	2.934E+00	5.167E+00	0.000E+00	0.561
RU-106	-3.140E+00	2.142E+01	3.680E+01	0.000E+00	-0.085
AG-110m	-1.253E+00	2.351E+00	3.952E+00	0.000E+00	-0.317
SN-113	-1.453E+00	3.232E+00	5.393E+00	0.000E+00	-0.269
SB-124	-6.792E+00	3.445E+00	4.365E+00	0.000E+00	-1.556
SB-125	-2.966E+00	7.062E+00	1.176E+01	0.000E+00	-0.252
TE-129M	4.181E+00	3.562E+01	6.051E+01	0.000E+00	0.069
I-131	-6.424E-01	7.641E+00	1.294E+01	0.000E+00	-0.050
BA-133	2.409E+00	3.846E+00	5.705E+00	0.000E+00	0.422
CS-134	2.596E+00	2.663E+00	4.225E+00	0.000E+00	0.615
CS-136	-9.797E-02	4.298E+00	7.396E+00	0.000E+00	-0.013
CS-137	1.137E+00	2.525E+00	4.451E+00	0.000E+00	0.255
CE-139	-5.212E-01	2.678E+00	4.449E+00	0.000E+00	-0.117
BA-140	6.467E+00	1.636E+01	2.820E+01	0.000E+00	0.229
LA-140	-1.655E+00	5.307E+00	9.193E+00	0.000E+00	-0.180
CE-141	5.945E+00	6.696E+00	9.757E+00	0.000E+00	0.609
CE-144	2.221E+00	2.363E+01	3.370E+01	0.000E+00	0.066
EU-152	1.887E+00	8.682E+00	1.263E+01	0.000E+00	0.149
EU-154	-3.002E+00	5.352E+00	8.881E+00	0.000E+00	-0.338
AC-228	4.050E+00	9.464E+00	1.522E+01	0.000E+00	0.266
TH-232	4.033E+00	9.423E+00	1.515E+01	0.000E+00	0.266
U-235	2.289E+01	2.443E+01	3.482E+01	0.000E+00	0.657
U-238	4.198E+01	2.499E+02	4.197E+02	0.000E+00	0.100
AM-241	-1.446E+01	1.491E+01	2.403E+01	0.000E+00	-0.602

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A,23L28851-16      ,06/13/2006 23:19,05/31/2006 11:45,   3.239E+00,WG L28851-16 D
B,23L28851-16      ,LIBD                ,06/01/2006 10:14,233L082404
C,RA-226   ,YES,    7.746E+00,    7.335E+01,    1.018E+02,,     0.076
C,TH-228   ,YES,    7.794E-01,    5.111E+00,    7.358E+00,,     0.106
C,BE-7     ,NO ,    2.124E+01,    2.318E+01,    4.071E+01,,     0.522
C,K-40     ,NO ,   -4.177E+01,    3.446E+01,    6.545E+01,,    -0.638
C,CR-51    ,NO ,   -1.027E+01,    2.858E+01,    4.804E+01,,    -0.214
C,MN-54    ,NO ,    5.464E-01,    2.390E+00,    4.152E+00,,     0.132
C,CO-57    ,NO ,   -1.759E+00,    2.615E+00,    4.331E+00,,    -0.406
C,CO-58    ,NO ,   -1.679E+00,    2.518E+00,    4.166E+00,,    -0.403
C,FE-59    ,NO ,   -6.468E-01,    6.428E+00,    9.348E+00,,    -0.069
C,CO-60    ,NO ,   -1.357E+00,    2.223E+00,    3.704E+00,,    -0.366
C,ZN-65    ,NO ,    9.423E+00,    4.888E+00,    9.299E+00,,     1.013
C,SE-75    ,NO ,   -9.808E-01,    3.493E+00,    5.912E+00,,    -0.166
C,SR-85    ,NO ,    1.405E+01,    3.050E+00,    5.889E+00,,     2.386
C,Y-88     ,NO ,    3.074E+00,    2.677E+00,    5.215E+00,,     0.589
C,NB-94    ,NO ,    2.794E-01,    2.232E+00,    3.867E+00,,     0.072
C,NB-95    ,NO ,    1.202E+00,    2.506E+00,    4.428E+00,,     0.271
C,ZR-95    ,NO ,   -1.472E+00,    4.576E+00,    7.743E+00,,    -0.190
C,MO-99    ,NO ,   -1.796E+02,    4.999E+02,    8.446E+02,,    -0.213
C,RU-103   ,NO ,    2.901E+00,    2.934E+00,    5.167E+00,,     0.561
C,RU-106   ,NO ,   -3.140E+00,    2.142E+01,    3.680E+01,,    -0.085
C,AG-110m  ,NO ,   -1.253E+00,    2.351E+00,    3.952E+00,,    -0.317
C,SN-113   ,NO ,   -1.453E+00,    3.232E+00,    5.393E+00,,    -0.269
C,SB-124   ,NO ,   -6.792E+00,    3.445E+00,    4.365E+00,,    -1.556
C,SB-125   ,NO ,   -2.966E+00,    7.062E+00,    1.176E+01,,    -0.252
C,TE-129M  ,NO ,    4.181E+00,    3.562E+01,    6.051E+01,,     0.069
C,I-131    ,NO ,   -6.424E-01,    7.641E+00,    1.294E+01,,    -0.050
C,BA-133   ,NO ,    2.409E+00,    3.846E+00,    5.705E+00,,     0.422
C,CS-134   ,NO ,    2.596E+00,    2.663E+00,    4.225E+00,,     0.615
C,CS-136   ,NO ,   -9.797E-02,    4.298E+00,    7.396E+00,,    -0.013
C,CS-137   ,NO ,    1.137E+00,    2.525E+00,    4.451E+00,,     0.255
C,CE-139   ,NO ,   -5.212E-01,    2.678E+00,    4.449E+00,,    -0.117
C,BA-140   ,NO ,    6.467E+00,    1.636E+01,    2.820E+01,,     0.229
C,LA-140   ,NO ,   -1.655E+00,    5.307E+00,    9.193E+00,,    -0.180
C,CE-141   ,NO ,    5.945E+00,    6.696E+00,    9.757E+00,,     0.609
C,CE-144   ,NO ,    2.221E+00,    2.363E+01,    3.370E+01,,     0.066
C,EU-152   ,NO ,    1.887E+00,    8.682E+00,    1.263E+01,,     0.149
C,EU-154   ,NO ,   -3.002E+00,    5.352E+00,    8.881E+00,,    -0.338
C,AC-228   ,NO ,    4.050E+00,    9.464E+00,    1.522E+01,,     0.266
C,TH-232   ,NO ,    4.033E+00,    9.423E+00,    1.515E+01,,     0.266
C,U-235    ,NO ,    2.289E+01,    2.443E+01,    3.482E+01,,     0.657
C,U-238    ,NO ,    4.198E+01,    2.499E+02,    4.197E+02,,     0.100
C,AM-241   ,NO ,   -1.446E+01,    1.491E+01,    2.403E+01,,    -0.602
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 05:42:04.06
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 13-JUN-2006 23:41:56.69

LIMS No., Customer Name, Client ID: WG L28851-17 EX DRES

Sample ID : 04L28851-17
Sample Type : WG
Quantity : 2.98580E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 14:00:00.
Geometry : 043L082004
BKGFILE : 04BG060306MT
Real Time : 0 06:00:03.64
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.01*	186	525	1.45	132.67	6.52E-01	8.61E-03	24.0	3.97E+00
2	1	92.70*	38	529	1.51	186.03	1.54E+00	1.78E-03	123.9	1.55E+00
3	1	139.36	104	585	0.82	279.32	2.04E+00	4.80E-03	43.7	9.07E+00
4	1	198.43*	100	369	1.26	397.40	1.86E+00	4.62E-03	42.2	9.45E-01
5	1	238.45*	4	365	1.48	477.39	1.68E+00	1.88E-04	965.6	1.90E+00
6	1	352.09*	38	230	1.05	704.57	1.28E+00	1.74E-03	84.8	9.47E-01
7	1	583.27*	36	92	1.73	1166.76	8.77E-01	1.64E-03	61.8	1.22E+00
8	1	595.71	85	165	1.68	1191.64	8.63E-01	3.93E-03	33.2	1.72E+00
9	1	609.54*	57	115	1.41	1219.27	8.48E-01	2.65E-03	51.2	2.04E+00
10	1	1460.64*	26	27	2.61	2921.14	4.30E-01	1.18E-03	74.3	1.08E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	26	10.67*	4.296E-01	2.335E+01	2.335E+01	148.70
TH-228	238.63	4	44.60*	1.680E+00	2.275E-01	2.306E-01	1931.25
	240.98	------	3.95	1.669E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28851-17

Acquisition date : 13-JUN-2006 23:41:56

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.335E+01	2.335E+01	3.471E+01	148.70	
TH-228	1.91Y	1.01	2.275E-01	2.306E-01	44.53E-01	1931.25	
	Total Activity :		2.357E+01	2.358E+01			
	Grand Total Activity :		2.357E+01	2.358E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28851-17

Acquisition date : 13-JUN-2006 23:41:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.01	186	525	1.45	132.67	130	8	8.61E-03	47.9	6.52E-01	
1	92.70	38	529	1.51	186.03	182	9	1.78E-03	****	1.54E+00	
1	139.36	104	585	0.82	279.32	276	9	4.80E-03	87.5	2.04E+00	
1	198.43	100	369	1.26	397.40	393	9	4.62E-03	84.4	1.86E+00	
1	352.09	38	230	1.05	704.57	701	9	1.74E-03	****	1.28E+00	
1	583.27	36	92	1.73	1166.76	1162	9	1.64E-03	****	8.77E-01	T
1	595.71	85	165	1.68	1191.64	1185	13	3.93E-03	66.3	8.63E-01	
1	609.54	57	115	1.41	1219.27	1213	13	2.65E-03	****	8.48E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.335E+01	2.335E+01	3.471E+01	148.70	
TH-228	1.91Y	1.01	2.275E-01	2.306E-01	44.53E-01	1931.25	
	Total Activity :		2.357E+01	2.358E+01			

Grand Total Activity : 2.357E+01 2.358E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.335E+01	3.471E+01	4.244E+01	0.000E+00	0.550
TH-228	2.306E-01	4.453E+00	6.229E+00	0.000E+00	0.037

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	5.122E+00		2.082E+01	3.482E+01	0.000E+00	0.147

NA-24	3.286E-01	4.309E+00	Half-Life too short		
CR-51	-9.342E+00	2.529E+01	4.128E+01	0.000E+00	-0.226
MN-54	-1.189E+00	2.362E+00	3.725E+00	0.000E+00	-0.319
CO-57	-1.096E+00	2.055E+00	3.305E+00	0.000E+00	-0.332
CO-58	-1.518E+00	2.678E+00	4.225E+00	0.000E+00	-0.359
FE-59	4.610E+00	5.255E+00	9.040E+00	0.000E+00	0.510
CO-60	1.149E+00	3.037E+00	4.815E+00	0.000E+00	0.239
ZN-65	3.325E+00	4.838E+00	8.379E+00	0.000E+00	0.397
SE-75	-1.055E+00	3.108E+00	4.974E+00	0.000E+00	-0.212
SR-85	2.253E+01	3.174E+00	6.289E+00	0.000E+00	3.582
Y-88	-1.882E+00	2.854E+00	4.431E+00	0.000E+00	-0.425
NB-94	1.978E+00	2.236E+00	3.842E+00	0.000E+00	0.515
NB-95	9.556E-01	2.588E+00	4.319E+00	0.000E+00	0.221
ZR-95	-5.116E+00	4.557E+00	6.996E+00	0.000E+00	-0.731
MO-99	3.144E+02	5.139E+02	8.704E+02	0.000E+00	0.361
RU-103	3.425E+00	2.949E+00	5.087E+00	0.000E+00	0.673
RU-106	-1.075E+01	2.243E+01	3.548E+01	0.000E+00	-0.303
AG-110m	1.782E+00	2.280E+00	3.920E+00	0.000E+00	0.455
SN-113	-3.903E+00	3.109E+00	4.808E+00	0.000E+00	-0.812
SB-124	-2.296E+00	6.416E+00	4.326E+00	0.000E+00	-0.531
SB-125	-2.247E-02	6.401E+00	1.067E+01	0.000E+00	-0.002
TE-129M	2.677E+01	3.194E+01	5.479E+01	0.000E+00	0.489
I-131	2.015E+00	7.238E+00	1.198E+01	0.000E+00	0.168
BA-133	6.728E+00	3.671E+00	5.588E+00	0.000E+00	1.204
CS-134	2.711E+00	4.428E+00	4.136E+00	0.000E+00	0.655
CS-136	-1.535E+00	4.765E+00	7.618E+00	0.000E+00	-0.201
CS-137	1.611E+00	2.465E+00	4.211E+00	0.000E+00	0.382
CE-139	-2.080E+00	2.168E+00	3.526E+00	0.000E+00	-0.590
BA-140	5.137E+00	1.577E+01	2.626E+01	0.000E+00	0.196
LA-140	-1.790E+00	5.956E+00	9.541E+00	0.000E+00	-0.188
CE-141	-1.063E+00	5.419E+00	7.420E+00	0.000E+00	-0.143
CE-144	-1.614E+01	1.916E+01	2.575E+01	0.000E+00	-0.627
EU-152	-9.179E+00	7.958E+00	1.119E+01	0.000E+00	-0.820
EU-154	-3.199E+00	4.264E+00	6.818E+00	0.000E+00	-0.469
RA-226	1.902E+01	5.782E+01	9.099E+01	0.000E+00	0.209
AC-228	-7.953E+00	9.717E+00	1.456E+01	0.000E+00	-0.546
TH-232	-7.917E+00	9.674E+00	1.449E+01	0.000E+00	-0.546
U-235	6.675E+00	1.889E+01	2.643E+01	0.000E+00	0.253
U-238	-1.032E+00	2.618E+02	4.291E+02	0.000E+00	-0.002
AM-241	-5.364E+00	2.235E+01	3.478E+01	0.000E+00	-0.154

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A,04L28851-17      ,06/14/2006 05:42,05/31/2006 14:00,   2.986E+00,WG L28851-17 E
B,04L28851-17      ,LIBD                ,06/13/2006 09:42,043L082004
C,K-40     ,YES,    2.335E+01,   3.471E+01,   4.244E+01,,     0.550
C,TH-228   ,YES,    2.306E-01,   4.453E+00,   6.229E+00,,     0.037
C,BE-7     ,NO ,    5.122E+00,   2.082E+01,   3.482E+01,,     0.147
C,CR-51    ,NO ,   -9.342E+00,   2.529E+01,   4.128E+01,,    -0.226
C,MN-54    ,NO ,   -1.189E+00,   2.362E+00,   3.725E+00,,    -0.319
C,CO-57    ,NO ,   -1.096E+00,   2.055E+00,   3.305E+00,,    -0.332
C,CO-58    ,NO ,   -1.518E+00,   2.678E+00,   4.225E+00,,    -0.359
C,FE-59    ,NO ,    4.610E+00,   5.255E+00,   9.040E+00,,     0.510
C,CO-60    ,NO ,    1.149E+00,   3.037E+00,   4.815E+00,,     0.239
C,ZN-65    ,NO ,    3.325E+00,   4.838E+00,   8.379E+00,,     0.397
C,SE-75    ,NO ,   -1.055E+00,   3.108E+00,   4.974E+00,,    -0.212
C,SR-85    ,NO ,    2.253E+01,   3.174E+00,   6.289E+00,,     3.582
C,Y-88     ,NO ,   -1.882E+00,   2.854E+00,   4.431E+00,,    -0.425
C,NB-94    ,NO ,    1.978E+00,   2.236E+00,   3.842E+00,,     0.515
C,NB-95    ,NO ,    9.556E-01,   2.588E+00,   4.319E+00,,     0.221
C,ZR-95    ,NO ,   -5.116E+00,   4.557E+00,   6.996E+00,,    -0.731
C,MO-99    ,NO ,    3.144E+02,   5.139E+02,   8.704E+02,,     0.361
C,RU-103   ,NO ,    3.425E+00,   2.949E+00,   5.087E+00,,     0.673
C,RU-106   ,NO ,   -1.075E+01,   2.243E+01,   3.548E+01,,    -0.303
C,AG-110m  ,NO ,    1.782E+00,   2.280E+00,   3.920E+00,,     0.455
C,SN-113   ,NO ,   -3.903E+00,   3.109E+00,   4.808E+00,,    -0.812
C,SB-124   ,NO ,   -2.296E+00,   6.416E+00,   4.326E+00,,    -0.531
C,SB-125   ,NO ,   -2.247E-02,   6.401E+00,   1.067E+01,,    -0.002
C,TE-129M  ,NO ,    2.677E+01,   3.194E+01,   5.479E+01,,     0.489
C,I-131    ,NO ,    2.015E+00,   7.238E+00,   1.198E+01,,     0.168
C,BA-133   ,NO ,    6.728E+00,   3.671E+00,   5.588E+00,,     1.204
C,CS-134   ,NO ,    2.711E+00,   4.428E+00,   4.136E+00,,     0.655
C,CS-136   ,NO ,   -1.535E+00,   4.765E+00,   7.618E+00,,    -0.201
C,CS-137   ,NO ,    1.611E+00,   2.465E+00,   4.211E+00,,     0.382
C,CE-139   ,NO ,   -2.080E+00,   2.168E+00,   3.526E+00,,    -0.590
C,BA-140   ,NO ,    5.137E+00,   1.577E+01,   2.626E+01,,     0.196
C,LA-140   ,NO ,   -1.790E+00,   5.956E+00,   9.541E+00,,    -0.188
C,CE-141   ,NO ,   -1.063E+00,   5.419E+00,   7.420E+00,,    -0.143
C,CE-144   ,NO ,   -1.614E+01,   1.916E+01,   2.575E+01,,    -0.627
C,EU-152   ,NO ,   -9.179E+00,   7.958E+00,   1.119E+01,,    -0.820
C,EU-154   ,NO ,   -3.199E+00,   4.264E+00,   6.818E+00,,    -0.469
C,RA-226   ,NO ,    1.902E+01,   5.782E+01,   9.099E+01,,     0.209
C,AC-228   ,NO ,   -7.953E+00,   9.717E+00,   1.456E+01,,    -0.546
C,TH-232   ,NO ,   -7.917E+00,   9.674E+00,   1.449E+01,,    -0.546
C,U-235    ,NO ,    6.675E+00,   1.889E+01,   2.643E+01,,     0.253
C,U-238    ,NO ,   -1.032E+00,   2.618E+02,   4.291E+02,,    -0.002
C,AM-241   ,NO ,   -5.364E+00,   2.235E+01,   3.478E+01,,    -0.154
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 05:42:16.93
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 13-JUN-2006 23:42:01.88

LIMS No., Customer Name, Client ID: WG L28851-18 EX DRES

Sample ID : 07L28851-18
Sample Type : WG
Quantity : 3.06340E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 31-MAY-2006 15:30:00.
Geometry : 073L082504
BKGFILE : 07BG060306MT
Real Time : 0 06:00:04.18
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	2	66.35*	240	392	1.25	133.26	8.06E-01	1.11E-02	15.8	2.69E+00
2	1	85.74	113	1014	3.84	172.09	1.53E+00	5.21E-03	61.3	4.59E+00
3	1	140.20*	179	502	1.23	281.10	2.36E+00	8.30E-03	25.4	4.98E+00
4	1	198.34*	111	490	1.40	397.44	2.25E+00	5.12E-03	41.9	2.13E+00
5	1	583.14*	65	99	2.57	1167.44	1.12E+00	3.00E-03	40.5	3.99E-01
6	1	596.14	78	141	1.54	1193.46	1.10E+00	3.62E-03	30.2	2.16E+00
7	1	609.77*	100	196	2.11	1220.73	1.09E+00	4.62E-03	36.8	2.14E+00
8	1	1461.31*	65	50	2.66	2923.60	5.83E-01	3.01E-03	39.7	1.56E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	65	10.67*	5.826E-01	4.266E+01	4.266E+01	79.37

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28851-18 Acquisition date : 13-JUN-2006 23:42:01

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.266E+01	4.266E+01	3.386E+01	79.37	
	Total Activity :		4.266E+01	4.266E+01			
	Grand Total Activity :		4.266E+01	4.266E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28851-18 Acquisition date : 13-JUN-2006 23:42:01

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	66.35	240	392	1.25	133.26	124	13	1.11E-02	31.6	8.06E-01	
1	85.74	113	1014	3.84	172.09	164	14	5.21E-03	****	1.53E+00	
1	140.20	179	502	1.23	281.10	277	8	8.30E-03	50.9	2.36E+00	
1	198.34	111	490	1.40	397.44	394	9	5.12E-03	83.7	2.25E+00	
1	583.14	65	99	2.57	1167.44	1163	10	3.00E-03	81.1	1.12E+00	T
1	596.14	78	141	1.54	1193.46	1189	9	3.62E-03	60.4	1.10E+00	
1	609.77	100	196	2.11	1220.73	1215	15	4.62E-03	73.6	1.09E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.266E+01	4.266E+01	3.386E+01	79.37	
	Total Activity :		4.266E+01	4.266E+01			
Grand Total Activity :			4.266E+01	4.266E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.266E+01	3.386E+01	3.015E+01	0.000E+00	1.415

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.145E+01		1.943E+01	3.296E+01	0.000E+00	0.651
NA-24	8.466E-01		3.069E+00	Half-Life too short		
CR-51	-4.739E+01		2.257E+01	3.524E+01	0.000E+00	-1.345
MN-54	1.327E+00		2.016E+00	3.433E+00	0.000E+00	0.387

CO-57	-1.275E+00	1.951E+00	3.140E+00	0.000E+00	-0.406
CO-58	9.811E-02	2.166E+00	3.594E+00	0.000E+00	0.027
FE-59	9.105E-01	4.467E+00	7.480E+00	0.000E+00	0.122
CO-60	-8.528E-01	2.154E+00	3.428E+00	0.000E+00	-0.249
ZN-65	4.570E+00	4.451E+00	7.747E+00	0.000E+00	0.590
SE-75	-1.733E+00	2.734E+00	4.383E+00	0.000E+00	-0.395
SR-85	2.253E+01	2.796E+00	5.554E+00	0.000E+00	4.056
Y-88	-9.107E-01	2.333E+00	3.748E+00	0.000E+00	-0.243
NB-94	-7.727E-01	2.027E+00	3.254E+00	0.000E+00	-0.237
NB-95	4.993E-01	2.211E+00	3.711E+00	0.000E+00	0.135
ZR-95	-2.789E+00	4.045E+00	6.348E+00	0.000E+00	-0.439
MO-99	-3.241E+02	4.574E+02	7.193E+02	0.000E+00	-0.451
RU-103	2.381E+00	2.547E+00	4.282E+00	0.000E+00	0.556
RU-106	1.107E+00	2.091E+01	3.194E+01	0.000E+00	0.035
AG-110m	-5.988E-02	1.977E+00	3.237E+00	0.000E+00	-0.019
SN-113	2.877E-02	2.737E+00	4.509E+00	0.000E+00	0.006
SB-124	8.975E-01	5.084E+00	3.688E+00	0.000E+00	0.243
SB-125	-2.392E+00	5.593E+00	9.022E+00	0.000E+00	-0.265
TE-129M	5.226E+00	2.897E+01	4.759E+01	0.000E+00	0.110
I-131	-2.109E+00	6.246E+00	1.022E+01	0.000E+00	-0.206
BA-133	4.232E+00	2.710E+00	4.697E+00	0.000E+00	0.901
CS-134	3.590E+00	3.480E+00	3.675E+00	0.000E+00	0.977
CS-136	-1.892E+00	3.806E+00	6.143E+00	0.000E+00	-0.308
CS-137	1.347E+00	2.082E+00	3.511E+00	0.000E+00	0.384
CE-139	-2.188E+00	1.960E+00	3.189E+00	0.000E+00	-0.686
BA-140	-9.686E-01	1.401E+01	2.319E+01	0.000E+00	-0.042
LA-140	-1.083E-01	4.647E+00	7.624E+00	0.000E+00	-0.014
CE-141	5.785E-01	5.054E+00	6.998E+00	0.000E+00	0.083
CE-144	-6.748E+00	1.757E+01	2.402E+01	0.000E+00	-0.281
EU-152	-1.610E+01	6.235E+00	9.527E+00	0.000E+00	-1.690
EU-154	-1.772E+00	3.970E+00	6.419E+00	0.000E+00	-0.276
RA-226	-1.573E+01	5.046E+01	8.083E+01	0.000E+00	-0.195
AC-228	1.243E+00	8.442E+00	1.317E+01	0.000E+00	0.094
TH-228	-7.575E-01	4.000E+00	6.343E+00	0.000E+00	-0.119
TH-232	1.237E+00	8.405E+00	1.311E+01	0.000E+00	0.094
U-235	1.244E+01	1.775E+01	2.507E+01	0.000E+00	0.496
U-238	9.699E+00	2.132E+02	3.488E+02	0.000E+00	0.028
AM-241	1.519E+01	2.073E+01	2.930E+01	0.000E+00	0.518

```
A,07L28851-18      ,06/14/2006 05:42,05/31/2006 15:30,   3.063E+00,WG L28851-18 E
B,07L28851-18      ,LIBD                ,06/07/2006 09:32,073L082504
C,K-40     ,YES,    4.266E+01,   3.386E+01,   3.015E+01,,     1.415
C,BE-7     ,NO ,    2.145E+01,   1.943E+01,   3.296E+01,,     0.651
C,CR-51    ,NO ,   -4.739E+01,   2.257E+01,   3.524E+01,,    -1.345
C,MN-54    ,NO ,    1.327E+00,   2.016E+00,   3.433E+00,,     0.387
C,CO-57    ,NO ,   -1.275E+00,   1.951E+00,   3.140E+00,,    -0.406
C,CO-58    ,NO ,    9.811E-02,   2.166E+00,   3.594E+00,,     0.027
C,FE-59    ,NO ,    9.105E-01,   4.467E+00,   7.480E+00,,     0.122
C,CO-60    ,NO ,   -8.528E-01,   2.154E+00,   3.428E+00,,    -0.249
C,ZN-65    ,NO ,    4.570E+00,   4.451E+00,   7.747E+00,,     0.590
C,SE-75    ,NO ,   -1.733E+00,   2.734E+00,   4.383E+00,,    -0.395
C,SR-85    ,NO ,    2.253E+01,   2.796E+00,   5.554E+00,,     4.056
C,Y-88     ,NO ,   -9.107E-01,   2.333E+00,   3.748E+00,,    -0.243
C,NB-94    ,NO ,   -7.727E-01,   2.027E+00,   3.254E+00,,    -0.237
C,NB-95    ,NO ,    4.993E-01,   2.211E+00,   3.711E+00,,     0.135
C,ZR-95    ,NO ,   -2.789E+00,   4.045E+00,   6.348E+00,,    -0.439
C,MO-99    ,NO ,   -3.241E+02,   4.574E+02,   7.193E+02,,    -0.451
C,RU-103   ,NO ,    2.381E+00,   2.547E+00,   4.282E+00,,     0.556
C,RU-106   ,NO ,    1.107E+00,   2.091E+01,   3.194E+01,,     0.035
C,AG-110m  ,NO ,   -5.988E-02,   1.977E+00,   3.237E+00,,    -0.019
C,SN-113   ,NO ,    2.877E-02,   2.737E+00,   4.509E+00,,     0.006
C,SB-124   ,NO ,    8.975E-01,   5.084E+00,   3.688E+00,,     0.243
C,SB-125   ,NO ,   -2.392E+00,   5.593E+00,   9.022E+00,,    -0.265
C,TE-129M  ,NO ,    5.226E+00,   2.897E+01,   4.759E+01,,     0.110
C,I-131    ,NO ,   -2.109E+00,   6.246E+00,   1.022E+01,,    -0.206
C,BA-133   ,NO ,    4.232E+00,   2.710E+00,   4.697E+00,,     0.901
C,CS-134   ,NO ,    3.590E+00,   3.480E+00,   3.675E+00,,     0.977
C,CS-136   ,NO ,   -1.892E+00,   3.806E+00,   6.143E+00,,    -0.308
C,CS-137   ,NO ,    1.347E+00,   2.082E+00,   3.511E+00,,     0.384
C,CE-139   ,NO ,   -2.188E+00,   1.960E+00,   3.189E+00,,    -0.686
C,BA-140   ,NO ,   -9.686E-01,   1.401E+01,   2.319E+01,,    -0.042
C,LA-140   ,NO ,   -1.083E-01,   4.647E+00,   7.624E+00,,    -0.014
C,CE-141   ,NO ,    5.785E-01,   5.054E+00,   6.998E+00,,     0.083
C,CE-144   ,NO ,   -6.748E+00,   1.757E+01,   2.402E+01,,    -0.281
C,EU-152   ,NO ,   -1.610E+01,   6.235E+00,   9.527E+00,,    -1.690
C,EU-154   ,NO ,   -1.772E+00,   3.970E+00,   6.419E+00,,    -0.276
C,RA-226   ,NO ,   -1.573E+01,   5.046E+01,   8.083E+01,,    -0.195
C,AC-228   ,NO ,    1.243E+00,   8.442E+00,   1.317E+01,,     0.094
C,TH-228   ,NO ,   -7.575E-01,   4.000E+00,   6.343E+00,,    -0.119
C,TH-232   ,NO ,    1.237E+00,   8.405E+00,   1.311E+01,,     0.094
C,U-235    ,NO ,    1.244E+01,   1.775E+01,   2.507E+01,,     0.496
C,U-238    ,NO ,    9.699E+00,   2.132E+02,   3.488E+02,,     0.028
C,AM-241   ,NO ,    1.519E+01,   2.073E+01,   2.930E+01,,     0.518
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28853

Exelon - Dresden

June 21, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28853
EX001-3ESPDRES-06

06/21/2006 11:16

Sample Receipt

The following samples were received on June 7, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-102I-060106-JL-075	L28853-1	
WG-DN-MW-DN-102S-060106-JL-076	L28853-2	
WG-DN-MW-DN-105S-060106-JL-077	L28853-3	
WG-DN-DSP-DN-125-060106-JL-078	L28853-4	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28853
EX001-3ESPDRES-06

06/21/2006 11:16

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4127.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-102I-060106-JL-075	L28853-1	WG4127-1

H-3

Quality Control

Quality control samples were analyzed as WG4122.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-110S-053006-JL-067	L28851-11	WG4122-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28853
EX001-3ESPDRES-06

06/21/2006 11:16

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4162.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
STILL CREEK	L28864-1	WG4162-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

06/07/06 12:32

SR #: SR08744

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Client: Exelon

Project #: EX001-3ESPDRES-06

LIMS #: L28851

Initiated By: BWILKERSON
Init Date: 06/07/06 Receive Date: 06/07/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	Y	Ph at or below 2
9	Other (Describe)	NA	

L28853

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Dresden Generating Station

SAMPLER'S SIGNATURE: Julie Luzwick PRINTED NAME: Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	Tritium	Strontium 90/90	Gamma Spec	REMARKS
	6/1/06	1045	WG-DN-MW-DN-102I-060106-JL-075	W	2	X	X	X	
	↓	1150	WG-DN-MW-DN-102S-060106-JL-076	W	2	X	X	X	
	↓	1410	WG-DN-MW-DN-105S-060106-JL-077	W	2	X	X	X	
	↓	1510	WG-DN-DSP-DN-12S-060106-JL-078	W	2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		8				

RELINQUISHED BY: ① Julie Luzwick	DATE: 6/1/06 TIME: 1540	RECEIVED BY: ② Alvaro Cook	DATE: 6-1-06 TIME: 1548
RELINQUISHED BY: ② [signature]	DATE: 6-5-06 TIME: 1345	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: B Wilherson 12771
DATE: 6-7-06 TIME: 8 AM

1001-00(SOURCE)GN-CO004

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28853-1 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-1 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-2 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-2 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-3 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-3 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Internal Chain of Custody

****

Sample # L28853-4 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

****

Sample # L28853-4 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/07/2006 00:00		099999	Sample Custodian

06/21/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28853

****

L28853-1 **WG** **WG-DN-MW-DN-102I-060106-JL-075**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/14/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28853-2 **WG** **WG-DN-MW-DN-102S-060106-JL-076**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KPW	06/14/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/21/06

****

L28853-3 **WG** **WG-DN-MW-DN-105S-060106-JL-077**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KPW	06/14/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28853-4 **WG** **WG-DN-DSP-DN-125-060106-JL-078**

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/07/06
Aliquot	GELI	DW	06/10/06
Aliquot	H-3	EJ	06/10/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KPW	06/14/06
Count Room	H-3	KOJ	06/13/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

Analytical Results Summary

Report of Analysis

06/21/06 11:15

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28853

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-102I-060106-JL-075** Collect Start: 06/01/2006 10:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28853-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.38E+03**	1.95E+02	1.93E+02	pCi/L		10	ml		06/13/06	44.74	M	+		
TOTAL SR	2018	6.41E-01	8.85E-01	**1.68E+00**	pCi/L		450	ml	06/01/06 10:45	06/20/06	120	M	U		
MN-54	2007	-5.42E-01	2.96E+00	**4.82E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
CO-58	2007	-2.01E-01	3.34E+00	**5.51E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
FE-59	2007	3.99E+00	7.24E+00	**1.25E+01**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
CO-60	2007	-7.05E-01	3.08E+00	**4.91E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
ZN-65	2007	5.33E+00	6.86E+00	**1.20E+01**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
NB-95	2007	3.49E+00	3.37E+00	**5.99E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
ZR-95	2007	-1.80E+00	5.97E+00	**9.47E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
CS-134	2007	6.40E-01	3.72E+00	**5.52E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
CS-137	2007	-3.33E+00	3.41E+00	**5.21E+00**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
BA-140	2007	1.09E+01	2.02E+01	**3.46E+01**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No
LA-140	2007	1.77E+00	6.36E+00	**1.08E+01**	pCi/L		3108.8	ml	06/01/06 10:45	06/14/06	9000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:15

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28853

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-102S-060106-JL-076** Collect Start: 06/01/2006 11:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28853-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**4.25E+03**	4.75E+02	3.09E+02	pCi/L		10	ml		06/13/06	17.94	M	+	High	
TOTAL SR	2018	7.50E-01	7.33E-01	**1.38E+00**	pCi/L		450	ml	06/01/06 11:50	06/21/06	100	M	U		
MN-54	2007	2.82E-01	2.53E+00	**4.21E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
CO-58	2007	-1.46E+00	2.81E+00	**4.51E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
FE-59	2007	5.59E-01	5.99E+00	**9.98E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
CO-60	2007	1.22E+00	2.36E+00	**4.04E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
ZN-65	2007	2.32E+00	5.68E+00	**9.64E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
NB-95	2007	3.54E-01	2.85E+00	**4.77E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
ZR-95	2007	-3.97E-01	5.10E+00	**8.25E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
CS-134	2007	6.71E+00	6.09E+00	**5.16E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
CS-137	2007	8.56E-01	2.56E+00	**4.27E+00**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
BA-140	2007	1.47E+01	1.78E+01	**3.07E+01**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No
LA-140	2007	6.22E+00	5.81E+00	**1.04E+01**	pCi/L		3083.9	ml	06/01/06 11:50	06/14/06	13342	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:15

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28853

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-105S-060106-JL-077** Collect Start: 06/01/2006 14:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28853-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	2.14E+01	1.10E+02	**1.78E+02**	pCi/L		10	ml		06/13/06	60	M	U		
TOTAL SR	2018	5.90E-01	7.40E-01	**1.40E+00**	pCi/L		450	ml	06/01/06 14:10	06/20/06	120	M	U		
MN-54	2007	1.27E+00	2.86E+00	**4.83E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
CO-58	2007	-1.96E+00	2.99E+00	**4.70E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
FE-59	2007	3.19E+00	6.59E+00	**1.12E+01**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
CO-60	2007	-8.67E-02	2.77E+00	**4.56E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
ZN-65	2007	7.14E+00	6.32E+00	**1.12E+01**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
NB-95	2007	2.13E+00	3.23E+00	**5.54E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
ZR-95	2007	1.51E+00	5.54E+00	**9.31E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
CS-134	2007	-3.79E+00	3.90E+00	**5.04E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
CS-137	2007	-1.70E+00	3.22E+00	**4.93E+00**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
BA-140	2007	-3.45E+00	1.88E+01	**3.08E+01**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No
LA-140	2007	-5.19E-01	6.21E+00	**1.00E+01**	pCi/L		3075.34	ml	06/01/06 14:10	06/14/06	12473	Sec	U		No

Flag Values
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MDC - Minimum Detectable Concentration

Report of Analysis

06/21/06 11:15

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28853

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-DSP-DN-125-060106-JL-078** Collect Start: 06/01/2006 15:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/07/2006 % Moisture:
LIMS Number: L28853-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**3.20E+02**	1.27E+02	1.78E+02	pCi/L		10	ml		06/13/06	60	M	+		
TOTAL SR	2018	3.70E-01	5.42E-01	**1.04E+00**	pCi/L		450	ml	06/01/06 15:10	06/20/06	120	M	U		
MN-54	2007	1.29E+00	2.85E+00	**5.07E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
CO-58	2007	5.46E-01	3.16E+00	**5.54E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
FE-59	2007	9.47E-01	6.56E+00	**1.16E+01**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
CO-60	2007	1.29E+00	2.80E+00	**5.14E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
ZN-65	2007	6.16E+00	6.03E+00	**1.14E+01**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
NB-95	2007	-1.74E-01	3.19E+00	**5.50E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
ZR-95	2007	4.35E-01	5.51E+00	**9.60E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
CS-134	2007	-1.10E+00	3.84E+00	**5.48E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
CS-137	2007	1.15E+00	3.08E+00	**5.46E+00**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
BA-140	2007	7.87E+00	2.13E+01	**3.67E+01**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No
LA-140	2007	1.11E+01	6.21E+00	**1.28E+01**	pCi/L		3056.25	ml	06/01/06 15:10	06/14/06	12600	Sec	U		No

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MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28853

6/21/2006 12:19:07PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4122-1	H-3	WO	06/13/2006 20:30	< 1.790E-02	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4122-2	H-3	WO	06/13/2006 21:33	5.05E+002	4.950E+02	pCi/Total	98.1	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4122-3 L28851-11	H-3	WG	06/13/2006 0:34	< 1.720E+02	< 1.710E+02	pCi/L		<30	**	NE

L28853 H-3

Associated Samples for WG4122

SAMPLENUM	CLIENTID
L28853-1	WG-DN-MW-DN-102I-060106-JL-075
L28853-2	WG-DN-MW-DN-102S-060106-JL-076
L28853-3	WG-DN-MW-DN-105S-060106-JL-077
L28853-4	WG-DN-DSP-DN-125-060106-JL-078

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28853

6/21/2006 12:19:07PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4162-1	TOTAL SR	WO	06/20/2006 20:27	< 7.860E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4162-2	TOTAL SR	WO	06/20/2006 20:27	5.84E+001	6.250E+01	pCi/Total	107.1	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4162-3 L28864-1	TOTAL SR	WG	06/20/2006 20:27	< 1.630E+00	< 1.570E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 21 2006, 11:29 am

Work Order: *L28853* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28853-1		H-3					0		13-jun-06 08:46	LS7	370	44.74	1.73	60	.214		EJ
WG-DN-MW-DN-102I-06010				10 ml													
Activity: 1.38E+03 * Error: 1.95E+02				MDC: 1.93E+02													
L28853-2		H-3					0		13-jun-06 09:35	LS7	388	17.94	1.73	60	.211		EJ
WG-DN-MW-DN-102S-06010				10 ml													
Activity: 4.25E+03 * Error: 4.75E+02				MDC: 3.09E+02													
L28853-3		H-3					0		13-jun-06 21:52	LS7	121	60	1.92	60	.211		EJ
WG-DN-MW-DN-105S-06010				10 ml													
Activity: 2.14E+01 Error: 1.1E+02				MDC: 1.78E+02 *													
L28853-4		H-3					0		13-jun-06 22:56	LS7	205	60	1.92	60	.212		EJ
WG-DN-DSP-DN-125-06010				10 ml													
Activity: 3.2E+02 * Error: 1.27E+02				MDC: 1.78E+02													

Raw Data Sheet (rawdata)
Jun 21 2006, 11:29 am

Work Order: *L28853* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28853-1		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X2A	95	120	264	400	.354	.999	LCB
WG-DN-MW-DN-102I-06010			10:45	450 ml	15:00			58.06	20:27								
Activity: 6.41E-01	Error: 8.85E-01		MDC: 1.68E+00 *														
L28853-2		TOTAL SR	01-jun-06		20-jun-06		0		21-jun-06	Y1C	97	100	300	400	.345	.999	LCB
WG-DN-MW-DN-102S-06010			11:50	450 ml	15:00			85.22	00:37								
Activity: 7.5E-01	Error: 7.33E-01		MDC: 1.38E+00 *														
L28853-3		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X2C	101	120	277	400	.344	.999	LCB
WG-DN-MW-DN-105S-06010			14:10	450 ml	15:00			73.66	20:27								
Activity: 5.9E-01	Error: 7.4E-01		MDC: 1.4E+00 *														
L28853-4		TOTAL SR	01-jun-06		20-jun-06		0		20-jun-06	X2D	108	120	307	400	.343	.999	LCB
WG-DN-DSP-DN-125-06010			15:10	450 ml	15:00			104.57	20:27								
Activity: 3.7E-01	Error: 5.42E-01		MDC: 1.04E+00 *														

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 16:44:39.71
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 14-JUN-2006 14:14:33.98

LIMS No., Customer Name, Client ID: WG L28853-1 EX DRES

Sample ID : 07L28853-1
Sample Type : WG
Quantity : 3.10880E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 10:45:00.0
Geometry : 073L082504
BKGFILE : 07BG060306MT
Real Time : 0 02:30:01.76
Live time : 0 02:30:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.36*	100	284	1.34	133.29	8.07E-01	1.11E-02	33.1	8.96E-01
2	1	139.55*	66	201	1.17	279.78	2.36E+00	7.32E-03	42.2	3.70E+00
3	1	584.05*	69	69	7.15	1169.27	1.12E+00	7.62E-03	31.7	7.38E+00
4	1	595.96	63	45	2.05	1193.09	1.10E+00	7.01E-03	22.7	9.29E-01
5	1	1460.83*	35	37	2.27	2922.65	5.83E-01	3.85E-03	52.6	1.11E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	35	10.67*	5.828E-01	5.381E+01	5.381E+01	105.25

Flag: "*" = Keyline

Summary of Nuclide Activity Page : 2
Sample ID : 07L28853-1 Acquisition date : 14-JUN-2006 14:14:33

Total number of lines in spectrum	5	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	2	40.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.381E+01	5.381E+01	5.663E+01	105.25	
	Total Activity :		5.381E+01	5.381E+01			
	Grand Total Activity :		5.381E+01	5.381E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28853-1

Acquisition date : 14-JUN-2006 14:14:33

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.36	100	284	1.34	133.29	129	9	1.11E-02	66.2	8.07E-01	
1	139.55	66	201	1.17	279.78	275	8	7.32E-03	84.4	2.36E+00	
1	584.05	69	69	7.15	1169.27	1164	17	7.62E-03	63.4	1.12E+00	T
1	595.96	63	45	2.05	1193.09	1189	9	7.01E-03	45.4	1.10E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	5	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	2	40.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.381E+01	5.381E+01	5.663E+01	105.25	
	Total Activity :		5.381E+01	5.381E+01			
	Grand Total Activity :		5.381E+01	5.381E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.381E+01	5.663E+01	4.510E+01	0.000E+00	1.193

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.927E+00		2.899E+01	4.740E+01	0.000E+00	0.041
NA-24	-3.897E-01		3.322E+00	Half-Life too short		
CR-51	-2.865E+01		3.583E+01	5.760E+01	0.000E+00	-0.497
MN-54	-5.423E-01		2.958E+00	4.819E+00	0.000E+00	-0.113
CO-57	-1.350E+00		3.074E+00	4.947E+00	0.000E+00	-0.273
CO-58	-2.014E-01		3.340E+00	5.505E+00	0.000E+00	-0.037
FE-59	3.989E+00		7.243E+00	1.251E+01	0.000E+00	0.319

CO-60	-7.048E-01	3.083E+00	4.913E+00	0.000E+00	-0.143
ZN-65	5.325E+00	6.861E+00	1.203E+01	0.000E+00	0.443
SE-75	-1.515E+00	4.414E+00	7.102E+00	0.000E+00	-0.213
SR-85	2.241E+01	4.167E+00	8.346E+00	0.000E+00	2.685
Y-88	-2.116E+00	3.316E+00	5.036E+00	0.000E+00	-0.420
NB-94	-1.006E-01	2.981E+00	4.854E+00	0.000E+00	-0.021
NB-95	3.488E+00	3.372E+00	5.988E+00	0.000E+00	0.582
ZR-95	-1.795E+00	5.971E+00	9.472E+00	0.000E+00	-0.189
MO-99	4.380E+02	6.397E+02	1.091E+03	0.000E+00	0.402
RU-103	6.435E+00	3.787E+00	6.753E+00	0.000E+00	0.953
RU-106	-1.008E+01	2.767E+01	4.437E+01	0.000E+00	-0.227
AG-110m	-9.553E-02	3.135E+00	5.128E+00	0.000E+00	-0.019
SN-113	1.668E+00	4.146E+00	6.969E+00	0.000E+00	0.239
SB-124	-7.124E+00	4.728E+00	5.723E+00	0.000E+00	-1.245
SB-125	5.596E+00	8.458E+00	1.437E+01	0.000E+00	0.389
TE-129M	5.254E+01	4.377E+01	7.626E+01	0.000E+00	0.689
I-131	-3.425E+00	9.408E+00	1.528E+01	0.000E+00	-0.224
BA-133	4.213E+00	4.211E+00	7.291E+00	0.000E+00	0.578
CS-134	6.402E-01	3.721E+00	5.516E+00	0.000E+00	0.116
CS-136	-4.092E-01	5.618E+00	9.244E+00	0.000E+00	-0.044
CS-137	-3.325E+00	3.406E+00	5.208E+00	0.000E+00	-0.639
CE-139	-2.083E-01	2.889E+00	4.809E+00	0.000E+00	-0.043
BA-140	1.091E+01	2.016E+01	3.459E+01	0.000E+00	0.315
LA-140	1.774E+00	6.355E+00	1.078E+01	0.000E+00	0.165
CE-141	-1.519E+00	7.455E+00	1.017E+01	0.000E+00	-0.149
CE-144	-7.573E+00	2.824E+01	3.859E+01	0.000E+00	-0.196
EU-152	-7.022E+00	9.578E+00	1.535E+01	0.000E+00	-0.457
EU-154	6.554E-01	6.271E+00	1.028E+01	0.000E+00	0.064
RA-226	2.123E+01	7.351E+01	1.246E+02	0.000E+00	0.170
AC-228	1.422E+01	1.201E+01	2.144E+01	0.000E+00	0.663
TH-228	6.303E-01	6.037E+00	1.010E+01	0.000E+00	0.062
TH-232	1.416E+01	1.195E+01	2.135E+01	0.000E+00	0.663
U-235	4.809E+00	2.586E+01	3.605E+01	0.000E+00	0.133
U-238	6.100E+01	3.316E+02	5.495E+02	0.000E+00	0.111
AM-241	-3.504E+01	3.178E+01	4.301E+01	0.000E+00	-0.815

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A,07L28853-1      ,06/14/2006 16:44,06/01/2006 10:45,   3.109E+00,WG L28853-1 EX
B,07L28853-1      ,LIBD                ,06/07/2006 09:32,073L082504
C,K-40     ,YES,   5.381E+01,   5.663E+01,   4.510E+01,,    1.193
C,BE-7     ,NO ,   1.927E+00,   2.899E+01,   4.740E+01,,    0.041
C,CR-51    ,NO ,  -2.865E+01,   3.583E+01,   5.760E+01,,   -0.497
C,MN-54    ,NO ,  -5.423E-01,   2.958E+00,   4.819E+00,,   -0.113
C,CO-57    ,NO ,  -1.350E+00,   3.074E+00,   4.947E+00,,   -0.273
C,CO-58    ,NO ,  -2.014E-01,   3.340E+00,   5.505E+00,,   -0.037
C,FE-59    ,NO ,   3.989E+00,   7.243E+00,   1.251E+01,,    0.319
C,CO-60    ,NO ,  -7.048E-01,   3.083E+00,   4.913E+00,,   -0.143
C,ZN-65    ,NO ,   5.325E+00,   6.861E+00,   1.203E+01,,    0.443
C,SE-75    ,NO ,  -1.515E+00,   4.414E+00,   7.102E+00,,   -0.213
C,SR-85    ,NO ,   2.241E+01,   4.167E+00,   8.346E+00,,    2.685
C,Y-88     ,NO ,  -2.116E+00,   3.316E+00,   5.036E+00,,   -0.420
C,NB-94    ,NO ,  -1.006E-01,   2.981E+00,   4.854E+00,,   -0.021
C,NB-95    ,NO ,   3.488E+00,   3.372E+00,   5.988E+00,,    0.582
C,ZR-95    ,NO ,  -1.795E+00,   5.971E+00,   9.472E+00,,   -0.189
C,MO-99    ,NO ,   4.380E+02,   6.397E+02,   1.091E+03,,    0.402
C,RU-103   ,NO ,   6.435E+00,   3.787E+00,   6.753E+00,,    0.953
C,RU-106   ,NO ,  -1.008E+01,   2.767E+01,   4.437E+01,,   -0.227
C,AG-110m  ,NO ,  -9.553E-02,   3.135E+00,   5.128E+00,,   -0.019
C,SN-113   ,NO ,   1.668E+00,   4.146E+00,   6.969E+00,,    0.239
C,SB-124   ,NO ,  -7.124E+00,   4.728E+00,   5.723E+00,,   -1.245
C,SB-125   ,NO ,   5.596E+00,   8.458E+00,   1.437E+01,,    0.389
C,TE-129M  ,NO ,   5.254E+01,   4.377E+01,   7.626E+01,,    0.689
C,I-131    ,NO ,  -3.425E+00,   9.408E+00,   1.528E+01,,   -0.224
C,BA-133   ,NO ,   4.213E+00,   4.211E+00,   7.291E+00,,    0.578
C,CS-134   ,NO ,   6.402E-01,   3.721E+00,   5.516E+00,,    0.116
C,CS-136   ,NO ,  -4.092E-01,   5.618E+00,   9.244E+00,,   -0.044
C,CS-137   ,NO ,  -3.325E+00,   3.406E+00,   5.208E+00,,   -0.639
C,CE-139   ,NO ,  -2.083E-01,   2.889E+00,   4.809E+00,,   -0.043
C,BA-140   ,NO ,   1.091E+01,   2.016E+01,   3.459E+01,,    0.315
C,LA-140   ,NO ,   1.774E+00,   6.355E+00,   1.078E+01,,    0.165
C,CE-141   ,NO ,  -1.519E+00,   7.455E+00,   1.017E+01,,   -0.149
C,CE-144   ,NO ,  -7.573E+00,   2.824E+01,   3.859E+01,,   -0.196
C,EU-152   ,NO ,  -7.022E+00,   9.578E+00,   1.535E+01,,   -0.457
C,EU-154   ,NO ,   6.554E-01,   6.271E+00,   1.028E+01,,    0.064
C,RA-226   ,NO ,   2.123E+01,   7.351E+01,   1.246E+02,,    0.170
C,AC-228   ,NO ,   1.422E+01,   1.201E+01,   2.144E+01,,    0.663
C,TH-228   ,NO ,   6.303E-01,   6.037E+00,   1.010E+01,,    0.062
C,TH-232   ,NO ,   1.416E+01,   1.195E+01,   2.135E+01,,    0.663
C,U-235    ,NO ,   4.809E+00,   2.586E+01,   3.605E+01,,    0.133
C,U-238    ,NO ,   6.100E+01,   3.316E+02,   5.495E+02,,    0.111
C,AM-241   ,NO ,  -3.504E+01,   3.178E+01,   4.301E+01,,   -0.815
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 14:06:50.39
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 14-JUN-2006 10:24:15.43

LIMS No., Customer Name, Client ID: WG L28853-2 DRESDEN

Sample ID : 07L28853-2
Sample Type : WG
Quantity : 3.08390E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 11:50:00.0
Geometry : 073L082504
BKGFILE : 07BG060306MT
Real Time : 0 03:42:24.44
Live time : 0 03:42:21.81

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	139.93*	94	359	1.04	280.54	2.36E+00	7.04E-03	39.0	7.97E-01
2	1	198.29*	110	396	1.44	397.34	2.25E+00	8.22E-03	39.7	1.77E+00
3	2	241.92	92	193	1.63	484.67	2.04E+00	6.88E-03	29.4	1.84E+00
4	1	351.93*	81	157	1.37	704.82	1.61E+00	6.07E-03	35.7	1.67E+00
5	1	595.58	88	124	3.58	1192.33	1.10E+00	6.63E-03	30.3	2.96E+00
6	1	609.41*	147	82	1.85	1219.99	1.09E+00	1.10E-02	16.4	1.11E+00
7	1	1420.73	29	10	3.97	2842.49	5.94E-01	2.15E-03	26.1	3.40E+00
8	1	1461.17*	41	13	2.29	2923.33	5.83E-01	3.09E-03	40.7	1.54E+00
9	1	1764.71*	28	11	2.98	3530.00	5.12E-01	2.13E-03	38.6	1.12E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	41	10.67*	5.827E-01	4.360E+01	4.360E+01	81.36

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28853-2 Acquisition date : 14-JUN-2006 10:24:15

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.360E+01	4.360E+01	3.547E+01	81.36	
	Total Activity :		4.360E+01	4.360E+01			
	Grand Total Activity :		4.360E+01	4.360E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 07L28853-2 Acquisition date : 14-JUN-2006 10:24:15

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	139.93	94	359	1.04	280.54	277	8	7.04E-03	78.0	2.36E+00	
1	198.29	110	396	1.44	397.34	391	12	8.22E-03	79.3	2.25E+00	
2	241.92	92	193	1.63	484.67	474	15	6.88E-03	58.7	2.04E+00	T
1	351.93	81	157	1.37	704.82	699	10	6.07E-03	71.4	1.61E+00	
1	595.58	88	124	3.58	1192.33	1184	16	6.63E-03	60.6	1.10E+00	
1	609.41	147	82	1.85	1219.99	1214	11	1.10E-02	32.9	1.09E+00	
1	1420.73	29	10	3.97	2842.49	2837	10	2.15E-03	52.2	5.94E-01	
1	1764.71	28	11	2.98	3530.00	3521	14	2.13E-03	77.1	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.360E+01	4.360E+01	3.547E+01	81.36	
	Total Activity :		4.360E+01	4.360E+01			
	Grand Total Activity :		4.360E+01	4.360E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.360E+01	3.547E+01	4.086E+01	0.000E+00	1.067

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-5.289E-01		2.461E+01	4.003E+01	0.000E+00	-0.013
NA-24	-5.630E-01		2.511E+00	Half-Life too short		
CR-51	-3.192E+00		2.956E+01	4.903E+01	0.000E+00	-0.065

MN-54	2.820E-01	2.534E+00	4.214E+00	0.000E+00	0.067
CO-57	7.315E-01	2.530E+00	4.170E+00	0.000E+00	0.175
CO-58	-1.461E+00	2.809E+00	4.507E+00	0.000E+00	-0.324
FE-59	5.591E-01	5.986E+00	9.975E+00	0.000E+00	0.056
CO-60	1.219E+00	2.363E+00	4.039E+00	0.000E+00	0.302
ZN-65	2.323E+00	5.675E+00	9.638E+00	0.000E+00	0.241
SE-75	1.629E+00	3.584E+00	5.944E+00	0.000E+00	0.274
SR-85	2.126E+01	3.348E+00	6.704E+00	0.000E+00	3.171
Y-88	-5.072E-01	2.801E+00	4.552E+00	0.000E+00	-0.111
NB-94	7.120E-01	2.519E+00	4.174E+00	0.000E+00	0.171
NB-95	3.543E-01	2.850E+00	4.768E+00	0.000E+00	0.074
ZR-95	-3.969E-01	5.102E+00	8.247E+00	0.000E+00	-0.048
MO-99	2.136E+02	5.004E+02	8.346E+02	0.000E+00	0.256
RU-103	1.154E+00	3.230E+00	5.335E+00	0.000E+00	0.216
RU-106	6.096E+00	2.464E+01	4.105E+01	0.000E+00	0.148
AG-110m	1.818E+00	2.372E+00	4.062E+00	0.000E+00	0.448
SN-113	-3.676E-01	3.360E+00	5.507E+00	0.000E+00	-0.067
SB-124	-7.455E-01	6.769E+00	4.656E+00	0.000E+00	-0.160
SB-125	-1.258E+00	7.551E+00	1.228E+01	0.000E+00	-0.102
TE-129M	-1.107E+00	3.676E+01	5.990E+01	0.000E+00	-0.018
I-131	-1.719E+00	7.609E+00	1.247E+01	0.000E+00	-0.138
BA-133	9.254E+00	4.291E+00	6.706E+00	0.000E+00	1.380
CS-134	6.709E+00	6.085E+00	5.155E+00	0.000E+00	1.301
CS-136	1.590E+00	4.842E+00	8.167E+00	0.000E+00	0.195
CS-137	8.561E-01	2.557E+00	4.272E+00	0.000E+00	0.200
CE-139	1.139E+00	2.521E+00	4.259E+00	0.000E+00	0.268
BA-140	1.473E+01	1.781E+01	3.072E+01	0.000E+00	0.479
LA-140	6.218E+00	5.812E+00	1.041E+01	0.000E+00	0.597
CE-141	1.301E+00	6.517E+00	9.063E+00	0.000E+00	0.144
CE-144	-1.874E+01	2.302E+01	3.077E+01	0.000E+00	-0.609
EU-152	-1.529E+01	9.796E+00	1.255E+01	0.000E+00	-1.218
EU-154	1.766E+00	5.141E+00	8.483E+00	0.000E+00	0.208
RA-226	-1.619E+01	6.427E+01	1.057E+02	0.000E+00	-0.153
AC-228	1.270E+00	1.060E+01	1.725E+01	0.000E+00	0.074
TH-228	2.749E+00	5.868E+00	8.556E+00	0.000E+00	0.321
TH-232	1.264E+00	1.056E+01	1.718E+01	0.000E+00	0.074
U-235	1.051E+01	2.323E+01	3.266E+01	0.000E+00	0.322
U-238	2.097E+02	2.828E+02	4.842E+02	0.000E+00	0.433
AM-241	-4.227E+01	2.426E+01	3.700E+01	0.000E+00	-1.142

A,07L28853-2 ,06/14/2006 14:06,06/01/2006 11:50, 3.084E+00,WG L28853-2 DR
B,07L28853-2 ,LIBD ,06/07/2006 09:32,073L082504

C,K-40	,YES,	4.360E+01,	3.547E+01,	4.086E+01,,	1.067
C,BE-7	,NO ,	-5.289E-01,	2.461E+01,	4.003E+01,,	-0.013
C,CR-51	,NO ,	-3.192E+00,	2.956E+01,	4.903E+01,,	-0.065
C,MN-54	,NO ,	2.820E-01,	2.534E+00,	4.214E+00,,	0.067
C,CO-57	,NO ,	7.315E-01,	2.530E+00,	4.170E+00,,	0.175
C,CO-58	,NO ,	-1.461E+00,	2.809E+00,	4.507E+00,,	-0.324
C,FE-59	,NO ,	5.591E-01,	5.986E+00,	9.975E+00,,	0.056
C,CO-60	,NO ,	1.219E+00,	2.363E+00,	4.039E+00,,	0.302
C,ZN-65	,NO ,	2.323E+00,	5.675E+00,	9.638E+00,,	0.241
C,SE-75	,NO ,	1.629E+00,	3.584E+00,	5.944E+00,,	0.274
C,SR-85	,NO ,	2.126E+01,	3.348E+00,	6.704E+00,,	3.171
C,Y-88	,NO ,	-5.072E-01,	2.801E+00,	4.552E+00,,	-0.111
C,NB-94	,NO ,	7.120E-01,	2.519E+00,	4.174E+00,,	0.171
C,NB-95	,NO ,	3.543E-01,	2.850E+00,	4.768E+00,,	0.074
C,ZR-95	,NO ,	-3.969E-01,	5.102E+00,	8.247E+00,,	-0.048
C,MO-99	,NO ,	2.136E+02,	5.004E+02,	8.346E+02,,	0.256
C,RU-103	,NO ,	1.154E+00,	3.230E+00,	5.335E+00,,	0.216
C,RU-106	,NO ,	6.096E+00,	2.464E+01,	4.105E+01,,	0.148
C,AG-110m	,NO ,	1.818E+00,	2.372E+00,	4.062E+00,,	0.448
C,SN-113	,NO ,	-3.676E-01,	3.360E+00,	5.507E+00,,	-0.067
C,SB-124	,NO ,	-7.455E-01,	6.769E+00,	4.656E+00,,	-0.160
C,SB-125	,NO ,	-1.258E+00,	7.551E+00,	1.228E+01,,	-0.102
C,TE-129M	,NO ,	-1.107E+00,	3.676E+01,	5.990E+01,,	-0.018
C,I-131	,NO ,	-1.719E+00,	7.609E+00,	1.247E+01,,	-0.138
C,BA-133	,NO ,	9.254E+00,	4.291E+00,	6.706E+00,,	1.380
C,CS-134	,NO ,	6.709E+00,	6.085E+00,	5.155E+00,,	1.301
C,CS-136	,NO ,	1.590E+00,	4.842E+00,	8.167E+00,,	0.195
C,CS-137	,NO ,	8.561E-01,	2.557E+00,	4.272E+00,,	0.200
C,CE-139	,NO ,	1.139E+00,	2.521E+00,	4.259E+00,,	0.268
C,BA-140	,NO ,	1.473E+01,	1.781E+01,	3.072E+01,,	0.479
C,LA-140	,NO ,	6.218E+00,	5.812E+00,	1.041E+01,,	0.597
C,CE-141	,NO ,	1.301E+00,	6.517E+00,	9.063E+00,,	0.144
C,CE-144	,NO ,	-1.874E+01,	2.302E+01,	3.077E+01,,	-0.609
C,EU-152	,NO ,	-1.529E+01,	9.796E+00,	1.255E+01,,	-1.218
C,EU-154	,NO ,	1.766E+00,	5.141E+00,	8.483E+00,,	0.208
C,RA-226	,NO ,	-1.619E+01,	6.427E+01,	1.057E+02,,	-0.153
C,AC-228	,NO ,	1.270E+00,	1.060E+01,	1.725E+01,,	0.074
C,TH-228	,NO ,	2.749E+00,	5.868E+00,	8.556E+00,,	0.321
C,TH-232	,NO ,	1.264E+00,	1.056E+01,	1.718E+01,,	0.074
C,U-235	,NO ,	1.051E+01,	2.323E+01,	3.266E+01,,	0.322
C,U-238	,NO ,	2.097E+02,	2.828E+02,	4.842E+02,,	0.433
C,AM-241	,NO ,	-4.227E+01,	2.426E+01,	3.700E+01,,	-1.142

Sec. Review: Analyst: KG LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 14:08:51.53
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 14-JUN-2006 10:40:42.69

LIMS No., Customer Name, Client ID: WG L28853-3 DRESDEN

Sample ID : 13L28853-3
Sample Type : WG
Quantity : 3.07530E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 14:10:00.0
Geometry : 133L082404
BKGFILE : 13BG060306MT
Real Time : 0 03:27:56.61
Live time : 0 03:27:53.21

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.35	118	341	1.42	132.67	8.29E-01	9.45E-03	27.8	2.06E+00
2	1	76.99*	18	237	0.88	153.95	1.24E+00	1.45E-03	147.7	9.54E-01
3	1	140.10*	126	388	2.52	280.18	2.27E+00	1.01E-02	32.0	3.33E+00
4	1	185.90*	19	365	1.89	371.77	2.18E+00	1.49E-03	223.9	4.07E+00
5	1	198.42*	103	262	1.47	396.82	2.12E+00	8.27E-03	32.1	1.79E+00
6	1	351.56*	47	103	1.39	703.13	1.51E+00	3.80E-03	46.4	3.27E+00
7	1	582.16*	13	105	3.41	1164.46	1.04E+00	1.05E-03	189.2	1.67E+00
8	1	609.50*	42	116	1.68	1219.16	1.01E+00	3.36E-03	61.2	1.86E+00
9	1	968.39*	14	45	2.02	1937.29	7.02E-01	1.14E-03	104.5	4.66E+00
10	1	1765.33*	21	8	3.69	3532.61	4.55E-01	1.71E-03	46.3	5.16E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	19	3.28*	2.178E+00	1.829E+01	1.829E+01	447.85
TH-232	583.14	13	30.25	1.041E+00	2.923E+00	2.923E+00	378.40
	911.07	------	27.70*	7.361E-01	------	Line Not Found	------
	969.11	14	16.60	7.018E-01	8.606E+00	8.606E+00	208.94
U-235	143.76	------	10.50*	2.278E+00	------	Line Not Found	------
	163.35	------	4.70	2.256E+00	------	Line Not Found	------
	185.71	19	54.00	2.178E+00	1.111E+00	1.111E+00	447.85
	205.31	------	4.70	2.093E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28853-3

Acquisition date : 14-JUN-2006 10:40:42

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.829E+01	1.829E+01	8.189E+01	447.85	
TH-232	1.41E+10Y	1.00	2.923E+00	2.923E+00	11.06E+00	378.40	K
U-235	7.04E+08Y	1.00	1.111E+00	1.111E+00	4.974E+00	447.85	K
			---------	---------			
	Total Activity :		2.232E+01	2.232E+01			
	Grand Total Activity :		2.232E+01	2.232E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28853-3

Acquisition date : 14-JUN-2006 10:40:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.35	118	341	1.42	132.67	130	7	9.45E-03	55.7	8.29E-01	
1	76.99	18	237	0.88	153.95	148	9	1.45E-03	****	1.24E+00	
1	140.10	126	388	2.52	280.18	275	10	1.01E-02	64.1	2.27E+00	
1	198.42	103	262	1.47	396.82	393	9	8.27E-03	64.2	2.12E+00	
1	351.56	47	103	1.39	703.13	700	7	3.80E-03	92.9	1.51E+00	
1	609.50	42	116	1.68	1219.16	1213	13	3.36E-03	****	1.01E+00	
1	1765.33	21	8	3.69	3532.61	3526	15	1.71E-03	92.6	4.55E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	3	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.829E+01	1.829E+01	8.189E+01	447.85	
TH-232	1.41E+10Y	1.00	4.483E+00	4.483E+00	9.420E+00	210.16	
	Total Activity :		2.277E+01	2.277E+01			
	Grand Total Activity :		2.277E+01	2.277E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	1.829E+01	8.189E+01	1.074E+02	0.000E+00	0.170
TH-232	4.483E+00	9.420E+00	1.872E+01	0.000E+00	0.239

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.894E+00		2.726E+01	4.432E+01	0.000E+00	0.043
NA-24	-3.723E+00		2.544E+00	Half-Life too short		

K-40	4.415E+00	4.095E+01	7.770E+01	0.000E+00	0.057
CR-51	-3.417E+01	3.109E+01	4.958E+01	0.000E+00	-0.689
MN-54	1.268E+00	2.857E+00	4.826E+00	0.000E+00	0.263
CO-57	8.564E-01	2.591E+00	4.289E+00	0.000E+00	0.200
CO-58	-1.962E+00	2.988E+00	4.700E+00	0.000E+00	-0.417
FE-59	3.192E+00	6.590E+00	1.121E+01	0.000E+00	0.285
CO-60	-8.671E-02	2.766E+00	4.560E+00	0.000E+00	-0.019
ZN-65	7.143E+00	6.315E+00	1.120E+01	0.000E+00	0.638
SE-75	-2.117E+00	3.819E+00	6.095E+00	0.000E+00	-0.347
SR-85	1.607E+01	3.592E+00	6.905E+00	0.000E+00	2.328
Y-88	-2.033E+00	3.247E+00	4.953E+00	0.000E+00	-0.410
NB-94	1.385E+00	2.723E+00	4.657E+00	0.000E+00	0.297
NB-95	2.131E+00	3.228E+00	5.540E+00	0.000E+00	0.385
ZR-95	1.507E+00	5.536E+00	9.313E+00	0.000E+00	0.162
MO-99	6.542E+01	5.308E+02	8.866E+02	0.000E+00	0.074
RU-103	-1.273E+00	3.559E+00	5.825E+00	0.000E+00	-0.219
RU-106	-2.115E+01	2.648E+01	4.131E+01	0.000E+00	-0.512
AG-110m	2.369E+00	2.844E+00	4.858E+00	0.000E+00	0.488
SN-113	2.307E+00	3.738E+00	6.310E+00	0.000E+00	0.366
SB-124	-7.033E+00	4.332E+00	5.288E+00	0.000E+00	-1.330
SB-125	4.289E+00	8.116E+00	1.358E+01	0.000E+00	0.316
TE-129M	6.227E+00	3.830E+01	6.276E+01	0.000E+00	0.099
I-131	-1.982E+00	8.022E+00	1.310E+01	0.000E+00	-0.151
BA-133	2.141E+00	4.376E+00	6.336E+00	0.000E+00	0.338
CS-134	-3.793E+00	3.904E+00	5.043E+00	0.000E+00	-0.752
CS-136	-3.287E+00	5.153E+00	8.104E+00	0.000E+00	-0.406
CS-137	-1.700E+00	3.215E+00	4.925E+00	0.000E+00	-0.345
CE-139	-2.089E-01	2.840E+00	4.566E+00	0.000E+00	-0.046
BA-140	-3.446E+00	1.881E+01	3.083E+01	0.000E+00	-0.112
LA-140	-5.191E-01	6.213E+00	1.002E+01	0.000E+00	-0.052
CE-141	7.504E+00	6.578E+00	9.607E+00	0.000E+00	0.781
CE-144	5.126E+00	2.381E+01	3.358E+01	0.000E+00	0.153
EU-152	-8.753E+00	9.633E+00	1.375E+01	0.000E+00	-0.637
EU-154	-6.913E-01	5.363E+00	8.750E+00	0.000E+00	-0.079
AC-228	-1.997E+00	1.195E+01	1.880E+01	0.000E+00	-0.106
TH-228	4.172E-01	5.452E+00	8.903E+00	0.000E+00	0.047
U-235	1.491E+00	2.432E+01	3.362E+01	0.000E+00	0.044
U-238	-2.059E+02	3.461E+02	5.340E+02	0.000E+00	-0.386
AM-241	-4.500E+01	2.395E+01	3.638E+01	0.000E+00	-1.237

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A,13L28853-3       ,06/14/2006 14:08,06/01/2006 14:10,   3.075E+00,WG L28853-3 DR
B,13L28853-3       ,LIBD                ,06/13/2006 09:43,133L082404
C,RA-226   ,YES,    1.829E+01,   8.189E+01,   1.074E+02,,     0.170
C,TH-232   ,YES,    4.483E+00,   9.420E+00,   1.872E+01,,     0.239
C,BE-7     ,NO ,    1.894E+00,   2.726E+01,   4.432E+01,,     0.043
C,K-40     ,NO ,    4.415E+00,   4.095E+01,   7.770E+01,,     0.057
C,CR-51    ,NO ,   -3.417E+01,   3.109E+01,   4.958E+01,,    -0.689
C,MN-54    ,NO ,    1.268E+00,   2.857E+00,   4.826E+00,,     0.263
C,CO-57    ,NO ,    8.564E-01,   2.591E+00,   4.289E+00,,     0.200
C,CO-58    ,NO ,   -1.962E+00,   2.988E+00,   4.700E+00,,    -0.417
C,FE-59    ,NO ,    3.192E+00,   6.590E+00,   1.121E+01,,     0.285
C,CO-60    ,NO ,   -8.671E-02,   2.766E+00,   4.560E+00,,    -0.019
C,ZN-65    ,NO ,    7.143E+00,   6.315E+00,   1.120E+01,,     0.638
C,SE-75    ,NO ,   -2.117E+00,   3.819E+00,   6.095E+00,,    -0.347
C,SR-85    ,NO ,    1.607E+01,   3.592E+00,   6.905E+00,,     2.328
C,Y-88     ,NO ,   -2.033E+00,   3.247E+00,   4.953E+00,,    -0.410
C,NB-94    ,NO ,    1.385E+00,   2.723E+00,   4.657E+00,,     0.297
C,NB-95    ,NO ,    2.131E+00,   3.228E+00,   5.540E+00,,     0.385
C,ZR-95    ,NO ,    1.507E+00,   5.536E+00,   9.313E+00,,     0.162
C,MO-99    ,NO ,    6.542E+01,   5.308E+02,   8.866E+02,,     0.074
C,RU-103   ,NO ,   -1.273E+00,   3.559E+00,   5.825E+00,,    -0.219
C,RU-106   ,NO ,   -2.115E+01,   2.648E+01,   4.131E+01,,    -0.512
C,AG-110m  ,NO ,    2.369E+00,   2.844E+00,   4.858E+00,,     0.488
C,SN-113   ,NO ,    2.307E+00,   3.738E+00,   6.310E+00,,     0.366
C,SB-124   ,NO ,   -7.033E+00,   4.332E+00,   5.288E+00,,    -1.330
C,SB-125   ,NO ,    4.289E+00,   8.116E+00,   1.358E+01,,     0.316
C,TE-129M  ,NO ,    6.227E+00,   3.830E+01,   6.276E+01,,     0.099
C,I-131    ,NO ,   -1.982E+00,   8.022E+00,   1.310E+01,,    -0.151
C,BA-133   ,NO ,    2.141E+00,   4.376E+00,   6.336E+00,,     0.338
C,CS-134   ,NO ,   -3.793E+00,   3.904E+00,   5.043E+00,,    -0.752
C,CS-136   ,NO ,   -3.287E+00,   5.153E+00,   8.104E+00,,    -0.406
C,CS-137   ,NO ,   -1.700E+00,   3.215E+00,   4.925E+00,,    -0.345
C,CE-139   ,NO ,   -2.089E-01,   2.840E+00,   4.566E+00,,    -0.046
C,BA-140   ,NO ,   -3.446E+00,   1.881E+01,   3.083E+01,,    -0.112
C,LA-140   ,NO ,   -5.191E-01,   6.213E+00,   1.002E+01,,    -0.052
C,CE-141   ,NO ,    7.504E+00,   6.578E+00,   9.607E+00,,     0.781
C,CE-144   ,NO ,    5.126E+00,   2.381E+01,   3.358E+01,,     0.153
C,EU-152   ,NO ,   -8.753E+00,   9.633E+00,   1.375E+01,,    -0.637
C,EU-154   ,NO ,   -6.913E-01,   5.363E+00,   8.750E+00,,    -0.079
C,AC-228   ,NO ,   -1.997E+00,   1.195E+01,   1.880E+01,,    -0.106
C,TH-228   ,NO ,    4.172E-01,   5.452E+00,   8.903E+00,,     0.047
C,U-235    ,NO ,    1.491E+00,   2.432E+01,   3.362E+01,,     0.044
C,U-238    ,NO ,   -2.059E+02,   3.461E+02,   5.340E+02,,    -0.386
C,AM-241   ,NO ,   -4.500E+01,   2.395E+01,   3.638E+01,,    -1.237
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Sec. Review: Analyst: KD LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-JUN-2006 14:45:32.48
TBE23 03017322 HpGe ********** Aquisition Date/Time: 14-JUN-2006 11:13:08.64

LIMS No., Customer Name, Client ID: WG L28853-4 DRESDEN

Sample ID : 23L28853-4
Sample Type : WG
Quantity : 3.05620E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 1-JUN-2006 15:10:00.0
Geometry : 233L082404
BKGFILE : 23BG060306MT
Real Time : 0 03:30:08.44
Live time : 0 03:30:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	4	33.74*	69	7	1.24	67.81	8.18E-02	5.49E-03	24.5	3.97E+00
2	4	37.24*	33	92	1.62	74.79	1.43E-01	2.64E-03	96.9	
3	4	39.46*	30	151	1.77	79.23	1.92E-01	2.41E-03	107.6	
4	4	43.26*	35	225	1.78	86.84	2.95E-01	2.75E-03	95.9	
5	4	45.91*	6	293	1.79	92.13	3.78E-01	4.48E-04	591.0	
6	4	47.32*	28	269	1.78	94.94	4.26E-01	2.22E-03	104.4	
7	0	185.91*	87	414	0.95	371.92	2.17E+00	6.93E-03	49.5	
8	0	198.27*	78	321	1.07	396.62	2.11E+00	6.21E-03	44.0	
9	0	238.44*	45	329	1.21	476.92	1.90E+00	3.59E-03	82.6	
10	0	351.54*	45	212	0.92	702.99	1.44E+00	3.57E-03	71.4	
11	0	583.07*	26	71	0.92	1165.84	9.71E-01	2.10E-03	70.7	
12	0	609.39*	42	97	1.47	1218.46	9.40E-01	3.34E-03	58.3	
13	0	910.95*	44	47	1.70	1821.44	7.08E-01	3.47E-03	41.8	
14	0	1765.39*	7	14	2.32	3530.69	4.37E-01	5.71E-04	151.4	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	87	3.28*	2.173E+00	8.594E+01	8.594E+01	98.92
AC-228	835.50	------	1.75	7.515E-01	------	Line Not Found	------
	911.07	44	27.70*	7.084E-01	1.566E+01	1.572E+01	83.54
TH-228	238.63	45	44.60*	1.901E+00	3.748E+00	3.796E+00	165.24
	240.98	------	3.95	1.888E+00	------	Line Not Found	------
TH-232	583.14	26	30.25	9.714E-01	6.319E+00	6.319E+00	141.40
	911.07	44	27.70*	7.084E-01	1.566E+01	1.566E+01	83.54
	969.11	------	16.60	6.793E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28853-4 Acquisition date : 14-JUN-2006 11:13:08

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	8.594E+01	8.594E+01	8.501E+01	98.92	
AC-228	5.75Y	1.00	1.566E+01	1.572E+01	1.314E+01	83.54	
TH-228	1.91Y	1.01	3.748E+00	3.796E+00	6.272E+00	165.24	
TH-232	1.41E+10Y	1.00	1.566E+01	1.566E+01	1.308E+01	83.54	
	Total Activity :		1.210E+02	1.211E+02			
	Grand Total Activity :		1.210E+02	1.211E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28853-4

Acquisition date : 14-JUN-2006 11:13:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	33.74	69	7	1.24	67.81	65	35	5.49E-03	48.9	8.18E-02	
4	37.24	33	92	1.62	74.79	65	35	2.64E-03	****	1.43E-01	
4	39.46	30	151	1.77	79.23	65	35	2.41E-03	****	1.92E-01	
4	43.26	35	225	1.78	86.84	65	35	2.75E-03	****	2.95E-01	
4	45.91	6	293	1.79	92.13	65	35	4.48E-04	****	3.78E-01	
4	47.32	28	269	1.78	94.94	65	35	2.22E-03	****	4.26E-01	
0	198.27	78	321	1.07	396.62	393	8	6.21E-03	88.0	2.11E+00	
0	351.54	45	212	0.92	702.99	697	12	3.57E-03	****	1.44E+00	
0	609.39	42	97	1.47	1218.46	1211	14	3.34E-03	****	9.40E-01	
0	1765.39	7	14	2.32	3530.69	3525	13	5.71E-04	****	4.37E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	8.594E+01	8.594E+01	8.501E+01	98.92	
AC-228	5.75Y	1.00	9.338E+00	9.378E+00	15.91E+00	169.62	
TH-228	1.91Y	1.01	3.748E+00	3.796E+00	6.272E+00	165.24	
TH-232	1.41E+10Y	1.00	6.319E+00	6.319E+00	8.934E+00	141.40	
	Total Activity :		1.053E+02	1.054E+02			

Grand Total Activity : 1.053E+02 1.054E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	8.594E+01	8.501E+01	1.255E+02	0.000E+00	0.685
AC-228	9.378E+00	1.591E+01	1.704E+01	0.000E+00	0.550
TH-228	3.796E+00	6.272E+00	9.724E+00	0.000E+00	0.390

TH-232	6.319E+00	8.934E+00	1.927E+01	0.000E+00	0.328

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.750E+01		2.963E+01	5.245E+01	0.000E+00	0.524
NA-24	-2.808E+00		2.365E+00	Half-Life too short		
K-40	-2.652E+01		4.269E+01	8.438E+01	0.000E+00	-0.314
CR-51	-1.136E+01		3.524E+01	5.944E+01	0.000E+00	-0.191
MN-54	1.292E+00		2.845E+00	5.065E+00	0.000E+00	0.255
CO-57	4.660E-01		3.246E+00	5.477E+00	0.000E+00	0.085
CO-58	5.458E-01		3.164E+00	5.535E+00	0.000E+00	0.099
FE-59	9.474E-01		6.557E+00	1.163E+01	0.000E+00	0.081
CO-60	1.292E+00		2.800E+00	5.137E+00	0.000E+00	0.251
ZN-65	6.162E+00		6.030E+00	1.135E+01	0.000E+00	0.543
SE-75	-1.784E+00		4.321E+00	7.299E+00	0.000E+00	-0.244
SR-85	1.820E+01		3.835E+00	7.570E+00	0.000E+00	2.404
Y-88	1.977E+00		3.249E+00	6.195E+00	0.000E+00	0.319
NB-94	-1.100E+00		2.792E+00	4.727E+00	0.000E+00	-0.233
NB-95	-1.736E-01		3.185E+00	5.496E+00	0.000E+00	-0.032
ZR-95	4.354E-01		5.507E+00	9.603E+00	0.000E+00	0.045
MO-99	3.034E+02		5.264E+02	9.462E+02	0.000E+00	0.321
RU-103	-1.283E+00		3.683E+00	6.144E+00	0.000E+00	-0.209
RU-106	1.007E+01		2.717E+01	4.763E+01	0.000E+00	0.211
AG-110m	-2.338E-01		2.837E+00	4.910E+00	0.000E+00	-0.048
SN-113	-1.772E+00		4.122E+00	6.896E+00	0.000E+00	-0.257
SB-124	-5.751E+00		4.117E+00	5.385E+00	0.000E+00	-1.068
SB-125	2.780E-01		8.556E+00	1.459E+01	0.000E+00	0.019
TE-129M	-1.360E+01		4.215E+01	7.060E+01	0.000E+00	-0.193
I-131	-8.979E+00		8.968E+00	1.467E+01	0.000E+00	-0.612
BA-133	5.653E+00		4.792E+00	7.381E+00	0.000E+00	0.766
CS-134	-1.104E+00		3.835E+00	5.483E+00	0.000E+00	-0.201
CS-136	-5.703E+00		5.152E+00	8.248E+00	0.000E+00	-0.691
CS-137	1.149E+00		3.080E+00	5.462E+00	0.000E+00	0.210
CE-139	-2.166E+00		3.327E+00	5.474E+00	0.000E+00	-0.396
BA-140	7.866E+00		2.126E+01	3.673E+01	0.000E+00	0.214
LA-140	1.112E+01		6.213E+00	1.280E+01	0.000E+00	0.868
CE-141	-6.072E+00		7.302E+00	1.200E+01	0.000E+00	-0.506
CE-144	-2.525E+01		2.557E+01	4.197E+01	0.000E+00	-0.602
EU-152	-1.242E+01		1.215E+01	1.654E+01	0.000E+00	-0.751
EU-154	-7.881E-01		6.613E+00	1.109E+01	0.000E+00	-0.071
U-235	-1.979E+01		2.663E+01	4.275E+01	0.000E+00	-0.463
U-238	-2.375E+02		3.435E+02	5.536E+02	0.000E+00	-0.429
AM-241	7.234E+00		1.798E+01	2.999E+01	0.000E+00	0.241

A,23L28853-4 ,06/14/2006 14:45,06/01/2006 15:10, 3.056E+00,WG L28853-4 DR
B,23L28853-4 ,LIBD ,06/01/2006 10:14,233L082404

C,RA-226	,YES,	8.594E+01,	8.501E+01,	1.255E+02,,	0.685
C,AC-228	,YES,	9.378E+00,	1.591E+01,	1.704E+01,,	0.550
C,TH-228	,YES,	3.796E+00,	6.272E+00,	9.724E+00,,	0.390
C,TH-232	,YES,	6.319E+00,	8.934E+00,	1.927E+01,,	0.328
C,BE-7	,NO ,	2.750E+01,	2.963E+01,	5.245E+01,,	0.524
C,K-40	,NO ,	-2.652E+01,	4.269E+01,	8.438E+01,,	-0.314
C,CR-51	,NO ,	-1.136E+01,	3.524E+01,	5.944E+01,,	-0.191
C,MN-54	,NO ,	1.292E+00,	2.845E+00,	5.065E+00,,	0.255
C,CO-57	,NO ,	4.660E-01,	3.246E+00,	5.477E+00,,	0.085
C,CO-58	,NO ,	5.458E-01,	3.164E+00,	5.535E+00,,	0.099
C,FE-59	,NO ,	9.474E-01,	6.557E+00,	1.163E+01,,	0.081
C,CO-60	,NO ,	1.292E+00,	2.800E+00,	5.137E+00,,	0.251
C,ZN-65	,NO ,	6.162E+00,	6.030E+00,	1.135E+01,,	0.543
C,SE-75	,NO ,	-1.784E+00,	4.321E+00,	7.299E+00,,	-0.244
C,SR-85	,NO ,	1.820E+01,	3.835E+00,	7.570E+00,,	2.404
C,Y-88	,NO ,	1.977E+00,	3.249E+00,	6.195E+00,,	0.319
C,NB-94	,NO ,	-1.100E+00,	2.792E+00,	4.727E+00,,	-0.233
C,NB-95	,NO ,	-1.736E-01,	3.185E+00,	5.496E+00,,	-0.032
C,ZR-95	,NO ,	4.354E-01,	5.507E+00,	9.603E+00,,	0.045
C,MO-99	,NO ,	3.034E+02,	5.264E+02,	9.462E+02,,	0.321
C,RU-103	,NO ,	-1.283E+00,	3.683E+00,	6.144E+00,,	-0.209
C,RU-106	,NO ,	1.007E+01,	2.717E+01,	4.763E+01,,	0.211
C,AG-110m	,NO ,	-2.338E-01,	2.837E+00,	4.910E+00,,	-0.048
C,SN-113	,NO ,	-1.772E+00,	4.122E+00,	6.896E+00,,	-0.257
C,SB-124	,NO ,	-5.751E+00,	4.117E+00,	5.385E+00,,	-1.068
C,SB-125	,NO ,	2.780E-01,	8.556E+00,	1.459E+01,,	0.019
C,TE-129M	,NO ,	-1.360E+01,	4.215E+01,	7.060E+01,,	-0.193
C,I-131	,NO ,	-8.979E+00,	8.968E+00,	1.467E+01,,	-0.612
C,BA-133	,NO ,	5.653E+00,	4.792E+00,	7.381E+00,,	0.766
C,CS-134	,NO ,	-1.104E+00,	3.835E+00,	5.483E+00,,	-0.201
C,CS-136	,NO ,	-5.703E+00,	5.152E+00,	8.248E+00,,	-0.691
C,CS-137	,NO ,	1.149E+00,	3.080E+00,	5.462E+00,,	0.210
C,CE-139	,NO ,	-2.166E+00,	3.327E+00,	5.474E+00,,	-0.396
C,BA-140	,NO ,	7.866E+00,	2.126E+01,	3.673E+01,,	0.214
C,LA-140	,NO ,	1.112E+01,	6.213E+00,	1.280E+01,,	0.868
C,CE-141	,NO ,	-6.072E+00,	7.302E+00,	1.200E+01,,	-0.506
C,CE-144	,NO ,	-2.525E+01,	2.557E+01,	4.197E+01,,	-0.602
C,EU-152	,NO ,	-1.242E+01,	1.215E+01,	1.654E+01,,	-0.751
C,EU-154	,NO ,	-7.881E-01,	6.613E+00,	1.109E+01,,	-0.071
C,U-235	,NO ,	-1.979E+01,	2.663E+01,	4.275E+01,,	-0.463
C,U-238	,NO ,	-2.375E+02,	3.435E+02,	5.536E+02,,	-0.429
C,AM-241	,NO ,	7.234E+00,	1.798E+01,	2.999E+01,,	0.241

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28821

Exelon

June 12, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28821
EX001-3ESPDRES-06

06/12/2006 10:35

Sample Receipt

The following samples were received on June 2, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-DSP-121-052606-JH-014	L28821-1	
WG-DN-DSP-117-052606-JH-015	L28821-2	
WG-DN-DSP-148-053006-JH-017	L28821-3	
WG-DN-DSP-156-053006-JH-018	L28821-4	
WG-DN-DSP-DN-118-052506-JL-057	L28821-5	
WG-DN-DSP-DN-155-052506-JL-058	L28821-6	
WG-DN-DSP-DN-122-052506-JL-059	L28821-7	
WG-DN-DSP-DN-127-053006-JL-066	L28821-8	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28821
EX001-3ESPDRES-06

06/12/2006 10:35

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4095.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-121-052606-JH-014	L28821-1	WG4095-3

H-3

Quality Control

Quality control samples were analyzed as WG4106.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-LS-MW-LS-109S-052606-NK-021	L28801-11	WG4106-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28821
EX001-3ESPDRES-06

06/12/2006 10:35

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4133.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-121-052606-JH-014	L28821-1	WG4133-4

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

06/02/06 12:43

SR #: SR08689

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06 LIMS #: L28821

Initiated By: PMARSHALL
Init Date: 06/02/06 Receive Date: 06/02/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	Y	Ph at or below 2
9	Other (Describe)	NA	

L28821

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Nicholas Hill **PRINTED NAME:** Nicholas Hill

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Uranium	Sr 89/90	Gamma Spec	REMARKS
1	5/26/06	1520	WG-DN-DSP-121-052606-JH-014	Water	2	X	X	X	
2	5/26/06	1655	WG-DN-DSP-117-052606-JH-015	↓	↓	X	X	X	
3	5/30/06	1350	WG-DN-DSP-148-053006-JH-017			X	X	X	
4	5/30/06	1550	WG-DN-DSP-156-053006-JH-018			X	X	X	

TOTAL NUMBER OF CONTAINERS 8

RELINQUISHED BY: ① Nicholas Hill	DATE: 6/1/06 TIME: 1350	RECEIVED BY: ②	DATE: 6/1/06 TIME: 1300
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Pat Marshall DATE: 6/2/06 TIME: 1100

12769

1001-00(SOURCE)GN-CO004

L28821

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teklyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Lyszwick **PRINTED NAME:** Julie Luszwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	PARAMETERS: Strontium 89/90	PARAMETERS: Gamma Spec	REMARKS
	5/25/06	1015	WG-DN-DSP-DN-118-052506-JL-057	W	2	X	X	X	
	↓	1500	WG-DN-DSP-DN-155-052506-JL-058	W	2	X	X	X	
	↓	1700	WG-DN-DSP-DN-122-052506-JL-059	W	2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		6				

RELINQUISHED BY: ① Julie Lyszwick	DATE: 5/25/06 TIME: 1745	RECEIVED BY: ② Jul Fanton	DATE: 5/25/06 TIME: 1747
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Julie L.
Kendall R.

RECEIVED FOR LABORATORY BY: Pat Marshall 12783
DATE: 6/2/06 TIME: 1100

1001-00(SOURCE)GN-CO004

L28821

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45130-23

PROJECT NAME: Dresden Generating

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Luzwick **PRINTED NAME:** Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	PARAMETERS: Strontium 89/90	PARAMETERS: Gamma Spec	REMARKS
	5/3/06	1055	WG-DN-DSP-DN-127-053006-JL-0606	W	2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		2				

RELINQUISHED BY: ① Julie Luzwick	DATE: 6/1/06 TIME: 1300	RECEIVED BY: ②	DATE: 6/1/06 TIME: 1300
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 6/2/06 TIME: 1100

12774

1001-00(SOURCE)GN-CO004

L288219 of 82

6/12/06

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

June 06, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on June 02, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by June 09, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-DSP-121-052606-JH-014	**L28821-1**		**05/26/06:1520**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-117-052606-JH-015	**L28821-2**		**05/26/06:1655**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-148-053006-JH-017	**L28821-3**		**05/30/06:1350**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-156-053006-JH-018	**L28821-4**		**05/30/06:1550**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-118-052506-JL-0	**L28821-5**		**05/25/06:1015**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-155-052506-JL-0	**L28821-6**		**05/25/06:1500**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-122-052506-JL-0	**L28821-7**		**05/25/06:1700**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-DN-DSP-DN-127-053006-JL-0	**L28821-8**		**05/30/06:1055**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

End of document

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28821-1 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****

Sample # L28821-1 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****

Sample # L28821-2 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****

Sample # L28821-2 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By	Received By	
06/02/2006 00:00		099999	Sample Custodian

****

Sample # L28821-3 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****

Sample # L28821-3 Containernum 2

****

Sample # L28821-3 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****

Sample # L28821-4 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****

Sample # L28821-4 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****

Sample # L28821-5 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****

Sample # L28821-5 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****

Sample # L28821-6 Containernum 1

Prod	Analyst
GELI	EJ

****
Sample # L28821-6 Containernum 1

H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****
Sample # L28821-6 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****
Sample # L28821-7 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****
Sample # L28821-7 Containernum 2

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian

****
Sample # L28821-8 Containernum 1

Prod	Analyst
GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/02/2006 00:00			099999	Sample Custodian
06/08/2006 13:48	099999	Sample Custodian	029709	Susan Ogletree
06/08/2006 13:52	029709	Susan Ogletree	099999	Sample Custodian

****
Sample # L28821-8 Containernum 2

Prod	Analyst

06/12/06 10:45

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28821-8 Containernum 2

GELI	EJ
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date Relinquish By

06/02/2006 00:00

Received By

099999 Sample Custodian

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28821

****

L28821-1	WG	WG-DN-DSP-121-052606-JH-014		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		EJ	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-2	WG	WG-DN-DSP-117-052606-JH-015		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-3	WG	WG-DN-DSP-148-053006-JH-017		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-4	WG	WG-DN-DSP-156-053006-JH-018		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-5	WG	WG-DN-DSP-DN-118-052506-JL-057		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28821

L28821-5	WG	WG-DN-DSP-DN-118-052506-JL-057		
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-6	WG	WG-DN-DSP-DN-155-052506-JL-058		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-7	WG	WG-DN-DSP-DN-122-052506-JL-059		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

****

L28821-8	WG	WG-DN-DSP-DN-127-053006-JL-066		
Process step	Prod		Analyst	Date
Login			PMARSHALL	06/02/06
Aliquot	GELI		EJ	06/06/06
Aliquot	H-3		SO	06/07/06
Aliquot	SR-90 (FAST)		LCB	06/09/06
Count Room	GELI		KPW	06/08/06
Count Room	H-3		KPW	06/10/06
Count Room	SR-90 (FAST)		KOJ	06/12/06

Analytical Results Summary

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-121-052606-JH-014** Collect Start: 05/26/2006 15:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	9.07E+01	1.03E+02	**1.65E+02**	pCi/L		10	ml		06/10/06	135	M	U		
TOTAL SR	2018	1.94E-01	4.27E-01	**6.91E-01**	pCi/L		450	ml	05/26/06 15:20	06/12/06	400	M	U		
MN-54	2007	-3.26E-01	2.87E+00	**4.70E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
CO-58	2007	1.08E+00	3.03E+00	**5.09E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
FE-59	2007	3.92E+00	6.52E+00	**1.12E+01**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
CO-60	2007	-1.34E+00	2.98E+00	**4.68E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
ZN-65	2007	9.19E+00	6.29E+00	**1.13E+01**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
NB-95	2007	-1.59E+00	3.10E+00	**5.01E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
ZR-95	2007	-3.35E+00	5.37E+00	**8.62E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
CS-134	2007	6.95E+00	5.00E+00	**5.19E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
CS-137	2007	1.61E+00	2.98E+00	**4.98E+00**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
BA-140	2007	-1.93E+01	1.89E+01	**2.97E+01**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
LA-140	2007	4.05E+00	6.00E+00	**1.04E+01**	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	U		No
TH-232	2007	**1.69E+01**	8.46E+00	1.62E+01	pCi/L		3467.44	ml	05/26/06 15:20	06/08/06	22620	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L2882120 of 82

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-117-052606-JH-015** Collect Start: 05/26/2006 16:55 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
							10	ml		06/10/06	135	M	U		
H-3	2010	6.81E+01	1.02E+02	**1.65E+02**	pCi/L		450	ml	05/26/06 16:55	06/12/06	400	M	U		
TOTAL SR	2018	3.06E-01	4.57E-01	**7.33E-01**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
MN-54	2007	-1.50E-01	1.98E+00	**3.37E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
CO-58	2007	-2.71E-01	2.28E+00	**3.87E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
FE-59	2007	3.64E-01	4.27E+00	**7.49E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
CO-60	2007	-2.36E-01	2.05E+00	**3.54E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
ZN-65	2007	3.95E+00	4.38E+00	**7.97E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
NB-95	2007	3.49E-01	2.26E+00	**3.90E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
ZR-95	2007	-5.57E-01	4.14E+00	**7.04E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
CS-134	2007	6.30E-01	2.49E+00	**3.66E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
CS-137	2007	1.85E-01	2.15E+00	**3.72E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
BA-140	2007	1.24E+01	1.50E+01	**2.61E+01**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No
LA-140	2007	1.20E+00	4.46E+00	**8.03E+00**	pCi/L		3477.39	ml	05/26/06 16:55	06/08/06	21813	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L2882121 of 82

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-148-053006-JH-017** Collect Start: 05/30/2006 13:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**3.56E+02**	1.11E+02	1.64E+02	pCi/L		10	ml		06/10/06	135	M	+		
TOTAL SR	2018	6.47E-01	4.41E-01	**6.84E-01**	pCi/L		450	ml	05/30/06 13:50	06/12/06	400	M	U		
MN-54	2007	3.30E-01	3.05E+00	**5.07E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
CO-58	2007	-1.97E+00	3.17E+00	**5.01E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
FE-59	2007	4.14E+00	6.21E+00	**1.09E+01**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
CO-60	2007	-3.31E+00	3.03E+00	**4.32E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
ZN-65	2007	3.56E+00	6.49E+00	**1.12E+01**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
NB-95	2007	2.84E+00	3.27E+00	**5.75E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
ZR-95	2007	-1.31E+00	5.81E+00	**9.28E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
CS-134	2007	1.23E+01	5.49E+00	**6.10E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U*		No
CS-137	2007	-1.35E+00	3.35E+00	**5.33E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
BA-140	2007	-4.79E+00	1.60E+01	**2.60E+01**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No
LA-140	2007	-1.25E+00	5.53E+00	**8.85E+00**	pCi/L		3524.81	ml	05/30/06 13:50	06/08/06	8726	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L2882122 of 82

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-156-053006-JH-018** Collect Start: 05/30/2006 15:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.77E+02**	1.07E+02	1.67E+02	pCi/L		10	ml		06/10/06	135	M	+		
TOTAL SR	2018	8.33E-01	7.07E-01	**1.11E+00**	pCi/L		450	ml	05/30/06 15:50	06/12/06	400	M	U		
MN-54	2007	1.91E+00	3.02E+00	**5.17E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
CO-58	2007	-1.15E+00	3.13E+00	**4.96E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
FE-59	2007	4.45E+00	6.50E+00	**1.13E+01**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
CO-60	2007	-4.10E-01	3.58E+00	**5.77E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
ZN-65	2007	5.50E+00	6.64E+00	**1.16E+01**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
NB-95	2007	1.07E+00	3.19E+00	**5.36E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
ZR-95	2007	-5.00E+00	5.57E+00	**8.52E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
CS-134	2007	6.21E+00	4.73E+00	**5.59E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
CS-137	2007	7.71E-01	3.19E+00	**5.38E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
BA-140	2007	-2.35E+00	1.63E+01	**2.64E+01**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
LA-140	2007	4.22E+00	5.11E+00	**9.26E+00**	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	U		No
RA-226	2007	**1.21E+02**	6.84E+01	1.13E+02	pCi/L		3522.43	ml	05/30/06 15:50	06/08/06	11278	Sec	+		Yes

Flag Values
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 09:58

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-DN-118-052506-JL-057** Collect Start: 05/25/2006 10:15 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values	
H-3	2010	7.79E+01	1.03E+02	**1.66E+02**	pCi/L		10	ml		06/10/06	135	M	U	
TOTAL SR	2018	9.54E-01	6.85E-01	**1.06E+00**	pCi/L		450	ml	05/25/06 10:15	06/12/06	400	M	U	
MN-54	2007	-2.52E-01	2.57E+00	**4.23E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
CO-58	2007	1.54E-01	2.80E+00	**4.65E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
FE-59	2007	4.73E+00	6.01E+00	**1.05E+01**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
CO-60	2007	1.09E+00	2.86E+00	**4.82E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
ZN-65	2007	6.32E+00	5.78E+00	**1.03E+01**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
NB-95	2007	-6.23E-01	2.69E+00	**4.40E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
ZR-95	2007	1.02E-01	5.03E+00	**8.17E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
CS-134	2007	9.47E+00	4.73E+00	**4.93E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U*	No
CS-137	2007	5.84E-01	2.88E+00	**4.78E+00**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
BA-140	2007	-2.20E+01	1.85E+01	**2.86E+01**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No
LA-140	2007	1.98E+00	6.65E+00	**1.12E+01**	pCi/L		3633.1	ml	05/25/06 10:15	06/08/06	11005	Sec	U	No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

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Report of Analysis

06/12/06 09:58

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-DSP-DN-155-052506-JL-058** (WG)
Station:
Description:
LIMS Number: L28821-6

Collect Start: 05/25/2006 15:00
Collect Stop:
Receive Date: 06/02/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.47E+02	1.06E+02	**1.67E+02**	pCi/L		10	ml		06/10/06	135	M	U		
TOTAL SR	2018	**6.67E-01**	4.30E-01	6.63E-01	pCi/L		450	ml	05/25/06 15:00	06/12/06	400	M	+		
MN-54	2007	2.15E-01	3.21E+00	**5.32E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
CO-58	2007	-3.75E+00	3.50E+00	**5.34E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
FE-59	2007	7.96E+00	7.23E+00	**1.30E+01**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
CO-60	2007	-1.02E+00	3.10E+00	**4.91E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
ZN-65	2007	8.49E+00	7.95E+00	**1.25E+01**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
NB-95	2007	4.34E+00	3.61E+00	**6.42E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
ZR-95	2007	-4.21E+00	6.18E+00	**9.78E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
CS-134	2007	5.10E+00	5.02E+00	**5.53E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
CS-137	2007	3.80E+00	3.19E+00	**5.61E+00**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
BA-140	2007	-1.74E+01	2.35E+01	**3.71E+01**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	
LA-140	2007	7.10E+00	7.79E+00	**1.40E+01**	pCi/L		3631.16	ml	05/25/06 15:00	06/08/06	12642	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

L2882125 of 82

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-122-052506-JL-059** Collect Start: 05/25/2006 17:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-7

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
							10	ml		06/10/06	135	M	+		
H-3	2010	**1.44E+03**	1.39E+02	1.63E+02	pCi/L		450	ml	05/25/06 17:00	06/12/06	400	M	U		
TOTAL SR	2018	2.80E-01	4.74E-01	**7.62E-01**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
MN-54	2007	3.12E+00	2.97E+00	**5.24E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
CO-58	2007	-9.99E-01	3.39E+00	**5.44E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
FE-59	2007	-9.01E+00	7.02E+00	**1.03E+01**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
CO-60	2007	1.19E+00	3.39E+00	**5.24E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
ZN-65	2007	4.75E+00	7.32E+00	**1.27E+01**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
NB-95	2007	-1.84E+00	3.55E+00	**5.62E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
ZR-95	2007	-2.15E+00	6.09E+00	**9.76E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
CS-134	2007	-2.15E-01	4.43E+00	**6.19E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
CS-137	2007	-1.59E+00	3.34E+00	**5.36E+00**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
BA-140	2007	3.85E+00	2.18E+01	**3.58E+01**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	
LA-140	2007	-3.40E+00	7.23E+00	**1.14E+01**	pCi/L		3633.3	ml	05/25/06 17:00	06/08/06	12362	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 09:58

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28821

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-DSP-DN-127-053006-JL-066** Collect Start: 05/30/2006 10:55 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/02/2006 % Moisture:
LIMS Number: L28821-8

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	8.53E+01	1.02E+02	**1.63E+02**	pCi/L		10	ml		06/10/06	135	M	U		
TOTAL SR	2018	4.18E-01	5.39E-01	**8.63E-01**	pCi/L		450	ml	05/30/06 10:55	06/12/06	400	M	U		
MN-54	2007	-1.87E-01	1.88E+00	**3.12E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
CO-58	2007	-2.79E+00	2.00E+00	**3.12E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
FE-59	2007	4.23E+00	4.12E+00	**7.07E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
CO-60	2007	-2.41E-01	1.93E+00	**3.14E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
ZN-65	2007	4.88E+00	4.96E+00	**7.24E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
NB-95	2007	-1.86E-02	2.04E+00	**3.34E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
ZR-95	2007	-8.57E-01	3.72E+00	**6.05E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
CS-134	2007	3.81E+00	4.08E+00	**3.58E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
CS-137	2007	1.97E+00	2.33E+00	**3.51E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
BA-140	2007	-4.31E-01	1.09E+01	**1.77E+01**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	
LA-140	2007	2.90E+00	3.47E+00	**5.90E+00**	pCi/L		2849.81	ml	05/30/06 10:55	06/08/06	48036	Sec	U	No	

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MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28821

6/12/2006 10:01:43AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4106-1	H-3	WO	06/10/2006 3:12	< 1.680E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4106-2	H-3	WO	06/10/2006 4:15	5.05E+002	4.990E+02	pCi/Total	98.9	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4106-3 L28801-11	H-3	WG	06/10/2006 4:34	< 1.700E+02	< 1.710E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L2882129 of 82

QC Summary Report for L28821

6/12/2006 10:01:43AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28821 **H-3**

Associated Samples for **WG4106**

SAMPLENUM	CLIENTID
L28821-1	WG-DN-DSP-121-052606-JH-014
L28821-2	WG-DN-DSP-117-052606-JH-015
L28821-3	WG-DN-DSP-148-053006-JH-017
L28821-4	WG-DN-DSP-156-053006-JH-018
L28821-5	WG-DN-DSP-DN-118-052506-JL-057
L28821-6	WG-DN-DSP-DN-155-052506-JL-058
L28821-7	WG-DN-DSP-DN-122-052506-JL-059
L28821-8	WG-DN-DSP-DN-127-053006-JL-066

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L2882130 of 82

QC Summary Report for L28821

6/12/2006 10:01:43AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4133-1	TOTAL SR	WO	06/12/2006 8:10	< 4.830E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4133-2	TOTAL SR	WO	06/11/2006 23:28	5.84E+001	6.620E+01	pCi/Total	113.4	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4133-4 L28821-1	TOTAL SR	WG	06/12/2006 8:10	< 6.910E-01	1.110E+00	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L2882131 of 82

QC Summary Report for L28821

6/12/2006 10:01:43AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28821 **SR-90 (FAST)**

Associated Samples for **WG4133**

SAMPLENUM	CLIENTID
L28821-1	WG-DN-DSP-121-052606-JH-014
L28821-2	WG-DN-DSP-117-052606-JH-015
L28821-3	WG-DN-DSP-148-053006-JH-017
L28821-4	WG-DN-DSP-156-053006-JH-018
L28821-5	WG-DN-DSP-DN-118-052506-JL-057
L28821-6	WG-DN-DSP-DN-155-052506-JL-058
L28821-7	WG-DN-DSP-DN-122-052506-JL-059
L28821-8	WG-DN-DSP-DN-127-053006-JL-066

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L2882132 of 82

Raw Data

Raw Data Sheet (rawdata)
Jun 12 2006, 10:12 am

Work Order: *L28821* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28821-1		H-3					0		10-jun-06 00:09	LS5	495	135	3.27	135	.199		EJ
WG-DN-DSP-121-052606-J				10 ml													
Activity: 9.07E+01 Error: 1.03E+02				MDC: 1.65E+02 *													
L28821-2		H-3					0		10-jun-06 02:27	LS5	482	135	3.27	135	.199		SO
WG-DN-DSP-117-052606-J				10 ml													
Activity: 6.81E+01 Error: 1.02E+02				MDC: 1.65E+02 *													
L28821-3		H-3					0		10-jun-06 04:45	LS5	653	135	3.27	135	.199		SO
WG-DN-DSP-148-053006-J				10 ml													
Activity: 3.56E+02 * Error: 1.11E+02				MDC: 1.64E+02													
L28821-4		H-3					0		10-jun-06 07:03	LS5	545	135	3.27	135	.196		SO
WG-DN-DSP-156-053006-J				10 ml													
Activity: 1.77E+02 * Error: 1.07E+02				MDC: 1.67E+02													
L28821-5		H-3					0		10-jun-06 09:22	LS5	487	135	3.27	135	.197		SO
WG-DN-DSP-DN-118-05250				10 ml													
Activity: 7.79E+01 Error: 1.03E+02				MDC: 1.66E+02 *													
L28821-6		H-3					0		10-jun-06 11:40	LS5	528	135	3.27	135	.196		SO
WG-DN-DSP-DN-155-05250				10 ml													
Activity: 1.47E+02 Error: 1.06E+02				MDC: 1.67E+02 *													
L28821-7		H-3					0		10-jun-06 13:58	LS5	1305	135	3.27	135	.201		SO
WG-DN-DSP-DN-122-05250				10 ml													
Activity: 1.44E+03 * Error: 1.39E+02				MDC: 1.63E+02													
L28821-8		H-3					0		10-jun-06 16:17	LS5	493	135	3.27	135	.201		SO
WG-DN-DSP-DN-127-05300				10 ml													
Activity: 8.53E+01 Error: 1.02E+02				MDC: 1.63E+02 *													

Work Order: *L28821* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28821-1		TOTAL SR	26-may-06		11-jun-06		0		12-jun-06	X1A	331	400	308	400	.346	.999	LCB
WG-DN-DSP-121-052606-J			15:20	450 ml	13:00			85.75	08:10								
Activity: 1.94E-01	Error: 4.27E-01		MDC: 6.91E-01 *														
L28821-2		TOTAL SR	26-may-06		11-jun-06		0		12-jun-06	X1B	378	400	342	400	.343	.999	LCB
WG-DN-DSP-117-052606-J			16:55	450 ml	13:00			85.75	08:10								
Activity: 3.06E-01	Error: 4.57E-01		MDC: 7.33E-01 *														
L28821-3		TOTAL SR	30-may-06		11-jun-06		0		12-jun-06	X1C	364	400	289	400	.354	.999	LCB
WG-DN-DSP-148-053006-J			13:50	450 ml	13:00			81.99	08:10								
Activity: 6.47E-01	Error: 4.41E-01		MDC: 6.84E-01 *														
L28821-4		TOTAL SR	30-may-06		11-jun-06		0		12-jun-06	X2A	321	400	264	400	.354	.999	LCB
WG-DN-DSP-156-053006-J			15:50	450 ml	13:00			48.39	08:10								
Activity: 8.33E-01	Error: 7.07E-01		MDC: 1.11E+00 *														
L28821-5		TOTAL SR	25-may-06		11-jun-06		0		12-jun-06	X2B	360	400	289	400	.345	.999	LCB
WG-DN-DSP-DN-118-05250			10:15	450 ml	13:00			54.03	08:10								
Activity: 9.54E-01	Error: 6.85E-01		MDC: 1.06E+00 *														
L28821-6		TOTAL SR	25-may-06		11-jun-06		0		12-jun-06	X2C	355	400	277	400	.344	.999	LCB
WG-DN-DSP-DN-155-05250			15:00	450 ml	13:00			85.22	08:10								
Activity: 6.67E-01 *	Error: 4.3E-01		MDC: 6.63E-01														
L28821-7		TOTAL SR	25-may-06		11-jun-06		0		12-jun-06	X2D	337	400	307	400	.343	.999	LCB
WG-DN-DSP-DN-122-05250			17:00	450 ml	13:00			78.23	08:10								
Activity: 2.8E-01	Error: 4.74E-01		MDC: 7.62E-01 *														
L28821-8		TOTAL SR	30-may-06		11-jun-06		0		12-jun-06	X3A	406	400	363	400	.335	.999	LCB
WG-DN-DSP-DN-127-05300			10:55	450 ml	13:00			76.88	08:10								
Activity: 4.18E-01	Error: 5.39E-01		MDC: 8.63E-01 *														

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 16:21:58.59
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 8-JUN-2006 10:04:49.05

LIMS No., Customer Name, Client ID: WG L28821-1 DRESDEN

Sample ID : 15L28821-1
Sample Type : WG
Quantity : 3.46740E+00 L
Start Channel : 40
End Channel : 4090
MDA Constant : 0.00
Energy Tol : 1.50000
Pk Srch Sens: 5.00000
Library Used: LIBD
Smple Date: 26-MAY-2006 15:20:00.
Geometry : 1535L090104
BKGFILE : 15BG060306MT
Real Time : 0 06:17:02.80
Live time : 0 06:17:00.47

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.59	175	639	1.45	120.65	4.42E-01	7.72E-03	26.2	2.54E-01
2	1	139.77	117	564	1.47	267.82	1.48E+00	5.17E-03	36.5	9.37E-01
3	1	198.07	131	435	1.27	385.06	1.37E+00	5.78E-03	28.9	7.63E-01
4	1	238.47*	117	436	2.30	466.31	1.23E+00	5.16E-03	39.4	1.87E+00
5	1	351.58*	59	233	1.31	693.74	9.16E-01	2.59E-03	54.9	1.78E+00
6	1	583.93	89	193	5.35	1160.80	6.07E-01	3.96E-03	38.5	1.56E+00
7	1	595.63	84	178	1.66	1184.32	5.97E-01	3.71E-03	35.5	5.34E-01
8	1	608.50	145	140	2.85	1210.19	5.87E-01	6.43E-03	20.3	2.17E+00
9	1	910.54	58	71	2.56	1817.12	4.23E-01	2.56E-03	32.9	1.26E+00
10	1	1459.79*	57	36	2.79	2920.17	2.91E-01	2.53E-03	36.5	1.54E+00
11	1	1702.20	37	32	6.39	3406.75	2.60E-01	1.64E-03	36.3	4.09E+00
12	1	1763.92	42	26	1.81	3530.62	2.54E-01	1.85E-03	30.9	1.48E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	57	10.67*	2.909E-01	6.357E+01	6.357E+01	73.03
AC-228	835.50	------	1.75	4.539E-01	------ Line Not Found		------
	911.07	58	27.70*	4.233E-01	1.698E+01	1.706E+01	65.78
	238.63	117	44.60*	1.225E+00	7.365E+00	7.460E+00	78.88
TH-228	240.98	------	3.95	1.217E+00	------ Line Not Found		------
	583.14	89	30.25	6.069E-01	1.680E+01	1.680E+01	77.06
TH-232	911.07	58	27.70*	4.233E-01	1.698E+01	1.698E+01	65.78
	969.11	------	16.60	4.025E-01	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 15L28821-1

Acquisition date : 8-JUN-2006 10:04:49

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.357E+01	6.357E+01	4.643E+01	73.03	
AC-228	5.75Y	1.00	1.698E+01	1.706E+01	1.122E+01	65.78	
TH-228	1.91Y	1.01	7.365E+00	7.460E+00	5.884E+00	78.88	
TH-232	1.41E+10Y	1.00	1.698E+01	1.698E+01	1.117E+01	65.78	
	Total Activity :		1.049E+02	1.051E+02			

Grand Total Activity : 1.049E+02 1.051E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 15L28821-1

Acquisition date : 8-JUN-2006 10:04:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.59	175	639	1.45	120.65	117	8	7.72E-03	52.5	4.42E-01	
1	139.77	117	564	1.47	267.82	264	8	5.17E-03	73.1	1.48E+00	
1	198.07	131	435	1.27	385.06	381	8	5.78E-03	57.7	1.37E+00	
1	351.58	59	233	1.31	693.74	690	9	2.59E-03	****	9.16E-01	
1	595.63	84	178	1.66	1184.32	1177	14	3.71E-03	71.0	5.97E-01	
1	608.50	145	140	2.85	1210.19	1203	16	6.43E-03	40.7	5.87E-01	
1	1702.20	37	32	6.39	3406.75	3397	16	1.64E-03	72.6	2.60E-01	
1	1763.92	42	26	1.81	3530.62	3525	14	1.85E-03	61.8	2.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.357E+01	6.357E+01	4.643E+01	73.03	
TH-228	1.91Y	1.01	7.365E+00	7.460E+00	5.884E+00	78.88	
TH-232	1.41E+10Y	1.00	1.690E+01	1.690E+01	0.846E+01	50.03	
	Total Activity :		8.784E+01	8.794E+01			

Grand Total Activity : 8.784E+01 8.794E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.357E+01	4.643E+01	4.394E+01	0.000E+00	1.447
TH-228	7.460E+00	5.884E+00	7.660E+00	0.000E+00	0.974
TH-232	1.690E+01	8.458E+00	1.621E+01	0.000E+00	1.043

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.297E+01		2.611E+01	4.258E+01	0.000E+00	-0.305
NA-24	-4.750E+00		2.581E+00	Half-Life too short		
CR-51	-1.894E+01		3.181E+01	5.166E+01	0.000E+00	-0.367
MN-54	-3.263E-01		2.873E+00	4.702E+00	0.000E+00	-0.069
CO-57	-8.842E-01		2.739E+00	4.234E+00	0.000E+00	-0.209
CO-58	1.084E+00		3.026E+00	5.090E+00	0.000E+00	0.213
FE-59	3.921E+00		6.523E+00	1.117E+01	0.000E+00	0.351
CO-60	-1.340E+00		2.977E+00	4.678E+00	0.000E+00	-0.286
ZN-65	9.189E+00		6.286E+00	1.127E+01	0.000E+00	0.815
SE-75	-2.231E+00		3.865E+00	6.135E+00	0.000E+00	-0.364
SR-85	1.725E+01		3.419E+00	6.553E+00	0.000E+00	2.632
Y-88	-8.327E-01		3.165E+00	5.111E+00	0.000E+00	-0.163
NB-94	9.981E-01		2.729E+00	4.511E+00	0.000E+00	0.221
NB-95	-1.589E+00		3.104E+00	5.007E+00	0.000E+00	-0.317
ZR-95	-3.346E+00		5.374E+00	8.615E+00	0.000E+00	-0.388
MO-99	-1.286E+01		5.240E+02	8.689E+02	0.000E+00	-0.015
RU-103	3.627E-01		3.527E+00	5.877E+00	0.000E+00	0.062
RU-106	1.714E+01		2.684E+01	4.523E+01	0.000E+00	0.379
AG-110m	-1.433E+00		2.804E+00	4.452E+00	0.000E+00	-0.322
SN-113	4.679E+00		3.779E+00	6.456E+00	0.000E+00	0.725
SB-124	3.199E+00		6.138E+00	4.947E+00	0.000E+00	0.647
SB-125	3.659E+00		7.926E+00	1.313E+01	0.000E+00	0.279
TE-129M	1.485E+01		4.157E+01	6.827E+01	0.000E+00	0.217
I-131	-2.412E+00		8.071E+00	1.311E+01	0.000E+00	-0.184
BA-133	4.770E+00		4.146E+00	6.136E+00	0.000E+00	0.777
CS-134	6.953E+00		4.997E+00	5.188E+00	0.000E+00	1.340
CS-136	1.044E+00		5.267E+00	8.781E+00	0.000E+00	0.119
CS-137	1.609E+00		2.976E+00	4.982E+00	0.000E+00	0.323
CE-139	-8.001E-01		2.698E+00	4.430E+00	0.000E+00	-0.181
BA-140	-1.928E+01		1.887E+01	2.972E+01	0.000E+00	-0.649
LA-140	4.053E+00		5.996E+00	1.042E+01	0.000E+00	0.389
CE-141	2.439E+00		6.225E+00	8.973E+00	0.000E+00	0.272
CE-144	2.352E+00		2.305E+01	3.305E+01	0.000E+00	0.071
EU-152	-1.238E+01		9.952E+00	1.356E+01	0.000E+00	-0.913
EU-154	-1.818E+00		5.619E+00	8.685E+00	0.000E+00	-0.209
RA-226	-6.082E+01		7.061E+01	1.077E+02	0.000E+00	-0.565
AC-228	1.706E+01		1.122E+01	1.822E+01	0.000E+00	0.936
U-235	3.922E+00		2.213E+01	3.168E+01	0.000E+00	0.124
U-238	4.326E+02		3.127E+02	5.514E+02	0.000E+00	0.784
AM-241	-2.600E+01		3.233E+01	4.998E+01	0.000E+00	-0.520

A,15L28821-1 ,06/08/2006 16:21,05/26/2006 15:20, 3.467E+00,WG L28821-1 DR
B,15L28821-1 ,LIBD ,06/06/2006 10:43,1535L090104
C,K-40 ,YES, 6.357E+01, 4.643E+01, 4.394E+01,, 1.447
C,TH-228 ,YES, 7.460E+00, 5.884E+00, 7.660E+00,, 0.974
C,TH-232 ,YES, 1.690E+01, 8.458E+00, 1.621E+01,, 1.043
C,BE-7 ,NO , -1.297E+01, 2.611E+01, 4.258E+01,, -0.305
C,CR-51 ,NO , -1.894E+01, 3.181E+01, 5.166E+01,, -0.367
C,MN-54 ,NO , -3.263E-01, 2.873E+00, 4.702E+00,, -0.069
C,CO-57 ,NO , -8.842E-01, 2.739E+00, 4.234E+00,, -0.209
C,CO-58 ,NO , 1.084E+00, 3.026E+00, 5.090E+00,, 0.213
C,FE-59 ,NO , 3.921E+00, 6.523E+00, 1.117E+01,, 0.351
C,CO-60 ,NO , -1.340E+00, 2.977E+00, 4.678E+00,, -0.286
C,ZN-65 ,NO , 9.189E+00, 6.286E+00, 1.127E+01,, 0.815
C,SE-75 ,NO , -2.231E+00, 3.865E+00, 6.135E+00,, -0.364
C,SR-85 ,NO , 1.725E+01, 3.419E+00, 6.553E+00,, 2.632
C,Y-88 ,NO , -8.327E-01, 3.165E+00, 5.111E+00,, -0.163
C,NB-94 ,NO , 9.981E-01, 2.729E+00, 4.511E+00,, 0.221
C,NB-95 ,NO , -1.589E+00, 3.104E+00, 5.007E+00,, -0.317
C,ZR-95 ,NO , -3.346E+00, 5.374E+00, 8.615E+00,, -0.388
C,MO-99 ,NO , -1.286E+01, 5.240E+02, 8.689E+02,, -0.015
C,RU-103 ,NO , 3.627E-01, 3.527E+00, 5.877E+00,, 0.062
C,RU-106 ,NO , 1.714E+01, 2.684E+01, 4.523E+01,, 0.379
C,AG-110m ,NO , -1.433E+00, 2.804E+00, 4.452E+00,, -0.322
C,SN-113 ,NO , 4.679E+00, 3.779E+00, 6.456E+00,, 0.725
C,SB-124 ,NO , 3.199E+00, 6.138E+00, 4.947E+00,, 0.647
C,SB-125 ,NO , 3.659E+00, 7.926E+00, 1.313E+01,, 0.279
C,TE-129M ,NO , 1.485E+01, 4.157E+01, 6.827E+01,, 0.217
C,I-131 ,NO , -2.412E+00, 8.071E+00, 1.311E+01,, -0.184
C,BA-133 ,NO , 4.770E+00, 4.146E+00, 6.136E+00,, 0.777
C,CS-134 ,NO , 6.953E+00, 4.997E+00, 5.188E+00,, 1.340
C,CS-136 ,NO , 1.044E+00, 5.267E+00, 8.781E+00,, 0.119
C,CS-137 ,NO , 1.609E+00, 2.976E+00, 4.982E+00,, 0.323
C,CE-139 ,NO , -8.001E-01, 2.698E+00, 4.430E+00,, -0.181
C,BA-140 ,NO , -1.928E+01, 1.887E+01, 2.972E+01,, -0.649
C,LA-140 ,NO , 4.053E+00, 5.996E+00, 1.042E+01,, 0.389
C,CE-141 ,NO , 2.439E+00, 6.225E+00, 8.973E+00,, 0.272
C,CE-144 ,NO , 2.352E+00, 2.305E+01, 3.305E+01,, 0.071
C,EU-152 ,NO , -1.238E+01, 9.952E+00, 1.356E+01,, -0.913
C,EU-154 ,NO , -1.818E+00, 5.619E+00, 8.685E+00,, -0.209
C,RA-226 ,NO , -6.082E+01, 7.061E+01, 1.077E+02,, -0.565
C,AC-228 ,NO , 1.706E+01, 1.122E+01, 1.822E+01,, 0.936
C,U-235 ,NO , 3.922E+00, 2.213E+01, 3.168E+01,, 0.124
C,U-238 ,NO , 4.326E+02, 3.127E+02, 5.514E+02,, 0.784
C,AM-241 ,NO , -2.600E+01, 3.233E+01, 4.998E+01,, -0.520

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 16:22:10.02
TBE23 03017322 HpGe ********** Aquisition Date/Time: 8-JUN-2006 10:18:10.59

LIMS No., Customer Name, Client ID: WG L28821-2 DRESDEN

Sample ID : 23L28821-2
Sample Type : WG
Quantity : 3.47740E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 16:55:00.
Geometry : 2335L090704
BKGFILE : 23BG060306MT
Real Time : 0 06:03:48.22
Live time : 0 06:03:33.10

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	7	33.58*	25	31	0.92	67.49	9.07E-02	1.15E-03	102.1	3.02E+00
2	7	36.27*	9	163	1.84	72.87	1.35E-01	4.30E-04	491.2	
3	7	39.95*	64	431	2.36	80.22	2.12E-01	2.93E-03	78.9	
4	0	64.06*	243	1452	3.88	128.40	9.66E-01	1.11E-02	37.8	
5	0	92.72*	57	1019	1.32	185.68	1.70E+00	2.63E-03	117.7	
6	0	139.65*	167	844	1.29	279.47	2.05E+00	7.67E-03	35.6	
7	0	198.06*	152	684	1.58	396.22	1.90E+00	6.98E-03	36.4	
8	0	238.35*	38	437	1.18	476.73	1.73E+00	1.73E-03	115.1	
9	0	351.77*	8	272	1.65	703.45	1.32E+00	3.62E-04	454.7	
10	0	499.42	85	259	1.71	998.59	1.00E+00	3.90E-03	43.4	
11	0	582.62*	27	158	1.83	1164.94	8.89E-01	1.26E-03	108.3	
12	0	594.96	105	188	4.79	1189.61	8.75E-01	4.81E-03	30.8	
13	0	911.08*	28	74	2.33	1821.70	6.38E-01	1.29E-03	75.2	
14	0	1460.63*	8	40	1.74	2920.90	4.59E-01	3.45E-04	318.6	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	8	10.67*	4.595E-01	5.474E+00	5.474E+00	637.18
AC-228	835.50	------	1.75	6.790E-01	------	Line Not Found	------
	911.07	28	27.70*	6.383E-01	5.669E+00	5.693E+00	150.32
TH-228	238.63	38	44.60*	1.726E+00	1.747E+00	1.769E+00	230.23
	240.98	------	3.95	1.714E+00	------	Line Not Found	------
TH-232	583.14	27	30.25	8.890E-01	3.630E+00	3.630E+00	216.59
	911.07	28	27.70*	6.383E-01	5.669E+00	5.669E+00	150.32
	969.11	------	16.60	6.111E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28821-2

Acquisition date : 8-JUN-2006 10:18:10

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.474E+00	5.474E+00	34.88E+00	637.18	
AC-228	5.75Y	1.00	5.669E+00	5.693E+00	8.558E+00	150.32	
TH-228	1.91Y	1.01	1.747E+00	1.769E+00	4.073E+00	230.23	
TH-232	1.41E+10Y	1.00	5.669E+00	5.669E+00	8.522E+00	150.32	
	Total Activity :		1.856E+01	1.860E+01			

Grand Total Activity : 1.856E+01 1.860E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28821-2

Acquisition date : 8-JUN-2006 10:18:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	33.58	25	31	0.92	67.49	64	26	1.15E-03	****	9.07E-02	
7	36.27	9	163	1.84	72.87	64	26	4.30E-04	****	1.35E-01	
7	39.95	64	431	2.36	80.22	64	26	2.93E-03	****	2.12E-01	
0	64.06	243	1452	3.88	128.40	120	17	1.11E-02	75.6	9.66E-01	
0	92.72	57	1019	1.32	185.68	181	10	2.63E-03	****	1.70E+00	
0	139.65	167	844	1.29	279.47	274	10	7.67E-03	71.3	2.05E+00	
0	198.06	152	684	1.58	396.22	391	11	6.98E-03	72.8	1.90E+00	
0	351.77	8	272	1.65	703.45	698	10	3.62E-04	****	1.32E+00	
0	499.42	85	259	1.71	998.59	993	16	3.90E-03	86.9	1.00E+00	
0	594.96	105	188	4.79	1189.61	1182	16	4.81E-03	61.7	8.75E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.474E+00	5.474E+00	34.88E+00	637.18	
AC-228	5.75Y	1.00	2.039E+00	2.048E+00	11.64E+00	568.53	
TH-228	1.91Y	1.01	1.747E+00	1.769E+00	4.073E+00	230.23	
TH-232	1.41E+10Y	1.00	3.630E+00	3.630E+00	7.861E+00	216.59	
			---------	---------			
	Total Activity :		1.289E+01	1.292E+01			

Grand Total Activity : 1.289E+01 1.292E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.474E+00	3.488E+01	3.336E+01	0.000E+00	0.164
AC-228	2.048E+00	1.164E+01	1.284E+01	0.000E+00	0.159
TH-228	1.769E+00	4.073E+00	6.810E+00	0.000E+00	0.260

TH-232	3.630E+00	7.861E+00	1.387E+01	0.000E+00	0.262

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-7.629E+00		2.042E+01	3.392E+01	0.000E+00	-0.225
NA-24	-1.202E+00		1.631E+00	Half-Life too short		
CR-51	-6.224E+00		2.465E+01	4.150E+01	0.000E+00	-0.150
MN-54	-1.500E-01		1.977E+00	3.372E+00	0.000E+00	-0.044
CO-57	-1.680E+00		2.414E+00	3.995E+00	0.000E+00	-0.420
CO-58	-2.707E-01		2.276E+00	3.870E+00	0.000E+00	-0.070
FE-59	3.641E-01		4.273E+00	7.488E+00	0.000E+00	0.049
CO-60	-2.356E-01		2.051E+00	3.535E+00	0.000E+00	-0.067
ZN-65	3.951E+00		4.377E+00	7.974E+00	0.000E+00	0.495
SE-75	1.156E+00		3.086E+00	5.296E+00	0.000E+00	0.218
SR-85	1.426E+01		2.658E+00	5.148E+00	0.000E+00	2.771
Y-88	-8.805E-01		2.316E+00	3.961E+00	0.000E+00	-0.222
NB-94	-8.037E-01		2.043E+00	3.440E+00	0.000E+00	-0.234
NB-95	3.485E-01		2.258E+00	3.897E+00	0.000E+00	0.089
ZR-95	-5.569E-01		4.135E+00	7.036E+00	0.000E+00	-0.079
MO-99	-9.279E+01		3.759E+02	6.375E+02	0.000E+00	-0.146
RU-103	3.365E+00		3.082E+00	4.644E+00	0.000E+00	0.725
RU-106	-1.858E+01		2.039E+01	3.373E+01	0.000E+00	-0.551
AG-110m	1.039E-01		1.991E+00	3.436E+00	0.000E+00	0.030
SN-113	1.229E+00		2.983E+00	5.105E+00	0.000E+00	0.241
SB-124	-5.930E+00		2.969E+00	3.795E+00	0.000E+00	-1.563
SB-125	-1.339E+00		6.111E+00	1.024E+01	0.000E+00	-0.131
TE-129M	-2.124E+01		3.073E+01	5.047E+01	0.000E+00	-0.421
I-131	-2.700E+00		6.470E+00	1.081E+01	0.000E+00	-0.250
BA-133	4.413E+00		3.400E+00	5.156E+00	0.000E+00	0.856
CS-134	6.298E-01		2.487E+00	3.660E+00	0.000E+00	0.172
CS-136	1.109E-01		3.771E+00	6.472E+00	0.000E+00	0.017
CS-137	1.853E-01		2.152E+00	3.718E+00	0.000E+00	0.050
CE-139	-9.864E-01		2.452E+00	4.051E+00	0.000E+00	-0.243
BA-140	1.243E+01		1.504E+01	2.611E+01	0.000E+00	0.476
LA-140	1.201E+00		4.461E+00	8.025E+00	0.000E+00	0.150
CE-141	4.798E+00		5.956E+00	8.626E+00	0.000E+00	0.556
CE-144	-1.427E+01		2.182E+01	3.044E+01	0.000E+00	-0.469
EU-152	-7.664E+00		8.257E+00	1.135E+01	0.000E+00	-0.675
EU-154	-4.146E+00		4.928E+00	8.133E+00	0.000E+00	-0.510
RA-226	8.888E+00		6.358E+01	9.895E+01	0.000E+00	0.090
U-235	1.031E+00		2.233E+01	3.057E+01	0.000E+00	0.034
U-238	2.603E+01		2.409E+02	3.943E+02	0.000E+00	0.066
AM-241	2.853E+01		1.438E+01	2.130E+01	0.000E+00	1.340

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A,23L28821-2       ,06/08/2006 16:22,05/26/2006 16:55,   3.477E+00,WG L28821-2 DR
B,23L28821-2       ,LIBD                ,06/01/2006 10:14,2335L090704
C,K-40     ,YES,    5.474E+00,   3.488E+01,   3.336E+01,,     0.164
C,AC-228   ,YES,    2.048E+00,   1.164E+01,   1.284E+01,,     0.159
C,TH-228   ,YES,    1.769E+00,   4.073E+00,   6.810E+00,,     0.260
C,TH-232   ,YES,    3.630E+00,   7.861E+00,   1.387E+01,,     0.262
C,BE-7     ,NO ,   -7.629E+00,   2.042E+01,   3.392E+01,,    -0.225
C,CR-51    ,NO ,   -6.224E+00,   2.465E+01,   4.150E+01,,    -0.150
C,MN-54    ,NO ,   -1.500E-01,   1.977E+00,   3.372E+00,,    -0.044
C,CO-57    ,NO ,   -1.680E+00,   2.414E+00,   3.995E+00,,    -0.420
C,CO-58    ,NO ,   -2.707E-01,   2.276E+00,   3.870E+00,,    -0.070
C,FE-59    ,NO ,    3.641E-01,   4.273E+00,   7.488E+00,,     0.049
C,CO-60    ,NO ,   -2.356E-01,   2.051E+00,   3.535E+00,,    -0.067
C,ZN-65    ,NO ,    3.951E+00,   4.377E+00,   7.974E+00,,     0.495
C,SE-75    ,NO ,    1.156E+00,   3.086E+00,   5.296E+00,,     0.218
C,SR-85    ,NO ,    1.426E+01,   2.658E+00,   5.148E+00,,     2.771
C,Y-88     ,NO ,   -8.805E-01,   2.316E+00,   3.961E+00,,    -0.222
C,NB-94    ,NO ,   -8.037E-01,   2.043E+00,   3.440E+00,,    -0.234
C,NB-95    ,NO ,    3.485E-01,   2.258E+00,   3.897E+00,,     0.089
C,ZR-95    ,NO ,   -5.569E-01,   4.135E+00,   7.036E+00,,    -0.079
C,MO-99    ,NO ,   -9.279E+01,   3.759E+02,   6.375E+02,,    -0.146
C,RU-103   ,NO ,    3.365E+00,   3.082E+00,   4.644E+00,,     0.725
C,RU-106   ,NO ,   -1.858E+01,   2.039E+01,   3.373E+01,,    -0.551
C,AG-110m  ,NO ,    1.039E-01,   1.991E+00,   3.436E+00,,     0.030
C,SN-113   ,NO ,    1.229E+00,   2.983E+00,   5.105E+00,,     0.241
C,SB-124   ,NO ,   -5.930E+00,   2.969E+00,   3.795E+00,,    -1.563
C,SB-125   ,NO ,   -1.339E+00,   6.111E+00,   1.024E+01,,    -0.131
C,TE-129M  ,NO ,   -2.124E+01,   3.073E+01,   5.047E+01,,    -0.421
C,I-131    ,NO ,   -2.700E+00,   6.470E+00,   1.081E+01,,    -0.250
C,BA-133   ,NO ,    4.413E+00,   3.400E+00,   5.156E+00,,     0.856
C,CS-134   ,NO ,    6.298E-01,   2.487E+00,   3.660E+00,,     0.172
C,CS-136   ,NO ,    1.109E-01,   3.771E+00,   6.472E+00,,     0.017
C,CS-137   ,NO ,    1.853E-01,   2.152E+00,   3.718E+00,,     0.050
C,CE-139   ,NO ,   -9.864E-01,   2.452E+00,   4.051E+00,,    -0.243
C,BA-140   ,NO ,    1.243E+01,   1.504E+01,   2.611E+01,,     0.476
C,LA-140   ,NO ,    1.201E+00,   4.461E+00,   8.025E+00,,     0.150
C,CE-141   ,NO ,    4.798E+00,   5.956E+00,   8.626E+00,,     0.556
C,CE-144   ,NO ,   -1.427E+01,   2.182E+01,   3.044E+01,,    -0.469
C,EU-152   ,NO ,   -7.664E+00,   8.257E+00,   1.135E+01,,    -0.675
C,EU-154   ,NO ,   -4.146E+00,   4.928E+00,   8.133E+00,,    -0.510
C,RA-226   ,NO ,    8.888E+00,   6.358E+01,   9.895E+01,,     0.090
C,U-235    ,NO ,    1.031E+00,   2.233E+01,   3.057E+01,,     0.034
C,U-238    ,NO ,    2.603E+01,   2.409E+02,   3.943E+02,,     0.066
C,AM-241   ,NO ,    2.853E+01,   1.438E+01,   2.130E+01,,     1.340
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:39:41.06
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 8-JUN-2006 12:14:05.20

LIMS No., Customer Name, Client ID: WG L28821-3 DRESDEN

Sample ID : 07L28821-3
Sample Type : WG
Quantity : 3.52840E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 13:50:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 02:25:27.59
Live time : 0 02:25:25.83

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	140.25*	97	247	1.58	281.18	2.09E+00	1.12E-02	33.3	2.35E+00
2	1	241.70	54	136	1.43	484.24	1.80E+00	6.20E-03	41.4	1.28E+00
3	1	296.19	83	230	7.36	593.27	1.60E+00	9.48E-03	43.2	3.69E+00
4	1	596.78	82	86	0.88	1194.73	9.95E-01	9.43E-03	24.5	1.84E+01
5	1	609.22*	47	64	1.65	1219.61	9.81E-01	5.41E-03	41.3	1.44E+00
6	1	1294.10	32	22	5.99	2589.33	5.62E-01	3.62E-03	35.5	1.97E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28821-3

Acquisition date : 8-JUN-2006 12:14:05

Total number of lines in spectrum	6	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	1	16.67%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28821-3

Acquisition date : 8-JUN-2006 12:14:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	140.25	97	247	1.58	281.18	276	10	1.12E-02	66.6	2.09E+00	
1	241.70	54	136	1.43	484.24	474	16	6.20E-03	82.8	1.80E+00	T
1	296.19	83	230	7.36	593.27	586	17	9.48E-03	86.4	1.60E+00	
1	596.78	82	86	0.88	1194.73	1188	13	9.43E-03	49.1	9.95E-01	
1	609.22	47	64	1.65	1219.61	1215	12	5.41E-03	82.6	9.81E-01	
1	1294.10	32	22	5.99	2589.33	2583	15	3.62E-03	71.1	5.62E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 6
Number of unidentified lines 5
Number of lines tentatively identified by NID 1 16.67%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.357E+01		2.907E+01	4.859E+01	0.000E+00	0.279
NA-24	-1.245E-03		3.392E-02	Half-Life too short		
K-40	4.904E+01		4.267E+01	8.281E+01	0.000E+00	0.592
CR-51	1.373E+00		2.993E+01	4.994E+01	0.000E+00	0.028
MN-54	3.298E-01		3.045E+00	5.071E+00	0.000E+00	0.065
CO-57	2.136E+00		3.125E+00	5.225E+00	0.000E+00	0.409
CO-58	-1.966E+00		3.172E+00	5.005E+00	0.000E+00	-0.393
FE-59	4.136E+00		6.211E+00	1.087E+01	0.000E+00	0.380
CO-60	-3.309E+00		3.030E+00	4.323E+00	0.000E+00	-0.765
ZN-65	3.563E+00		6.492E+00	1.123E+01	0.000E+00	0.317
SE-75	-1.033E+00		4.172E+00	6.736E+00	0.000E+00	-0.153
SR-85	1.929E+01		3.927E+00	7.785E+00	0.000E+00	2.478
Y-88	-2.251E+00		3.382E+00	5.127E+00	0.000E+00	-0.439
NB-94	4.276E-02		2.900E+00	4.738E+00	0.000E+00	0.009
NB-95	2.844E+00		3.274E+00	5.754E+00	0.000E+00	0.494
ZR-95	-1.314E+00		5.813E+00	9.278E+00	0.000E+00	-0.142
MO-99	9.501E+00		2.210E+02	3.606E+02	0.000E+00	0.026
RU-103	6.266E-01		3.759E+00	6.163E+00	0.000E+00	0.102
RU-106	-3.601E+01		3.219E+01	4.764E+01	0.000E+00	-0.756
AG-110m	8.186E-01		3.123E+00	5.207E+00	0.000E+00	0.157
SN-113	5.835E-01		4.023E+00	6.677E+00	0.000E+00	0.087
SB-124	-3.400E+00		8.794E+00	5.624E+00	0.000E+00	-0.604

SB-125	4.873E+00	8.763E+00	1.480E+01	0.000E+00	0.329
TE-129M	-3.117E+01	4.130E+01	6.442E+01	0.000E+00	-0.484
I-131	-2.642E-01	6.518E+00	1.076E+01	0.000E+00	-0.025
BA-133	6.393E+00	4.485E+00	7.884E+00	0.000E+00	0.811
CS-134	1.230E+01	5.489E+00	6.095E+00	0.000E+00	2.018
CS-136	4.193E-01	4.603E+00	7.669E+00	0.000E+00	0.055
CS-137	-1.350E+00	3.348E+00	5.333E+00	0.000E+00	-0.253
CE-139	3.042E+00	3.083E+00	5.312E+00	0.000E+00	0.573
BA-140	-4.788E+00	1.599E+01	2.603E+01	0.000E+00	-0.184
LA-140	-1.246E+00	5.529E+00	8.854E+00	0.000E+00	-0.141
CE-141	5.071E-01	6.858E+00	9.497E+00	0.000E+00	0.053
CE-144	-2.019E+00	2.787E+01	3.847E+01	0.000E+00	-0.052
EU-152	-2.092E+01	1.027E+01	1.548E+01	0.000E+00	-1.352
EU-154	2.687E+00	6.468E+00	1.072E+01	0.000E+00	0.251
RA-226	1.110E+02	7.866E+01	1.378E+02	0.000E+00	0.805
AC-228	5.038E+00	1.192E+01	2.032E+01	0.000E+00	0.248
TH-228	4.236E+00	6.790E+00	1.019E+01	0.000E+00	0.416
TH-232	5.023E+00	1.188E+01	2.026E+01	0.000E+00	0.248
U-235	1.740E+01	2.655E+01	3.794E+01	0.000E+00	0.459
U-238	-5.083E+01	3.610E+02	5.823E+02	0.000E+00	-0.087
AM-241	-3.956E+01	3.010E+01	4.614E+01	0.000E+00	-0.858

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A,07L28821-3      ,06/08/2006 14:39,05/30/2006 13:50,   3.528E+00,WG L28821-3 DR
B,07L28821-3      ,LIBD                ,06/07/2006 09:32,0735L090904
C,BE-7     ,NO ,   1.357E+01,   2.907E+01,   4.859E+01,,     0.279
C,K-40     ,NO ,   4.904E+01,   4.267E+01,   8.281E+01,,     0.592
C,CR-51    ,NO ,   1.373E+00,   2.993E+01,   4.994E+01,,     0.028
C,MN-54    ,NO ,   3.298E-01,   3.045E+00,   5.071E+00,,     0.065
C,CO-57    ,NO ,   2.136E+00,   3.125E+00,   5.225E+00,,     0.409
C,CO-58    ,NO ,  -1.966E+00,   3.172E+00,   5.005E+00,,    -0.393
C,FE-59    ,NO ,   4.136E+00,   6.211E+00,   1.087E+01,,     0.380
C,CO-60    ,NO ,  -3.309E+00,   3.030E+00,   4.323E+00,,    -0.765
C,ZN-65    ,NO ,   3.563E+00,   6.492E+00,   1.123E+01,,     0.317
C,SE-75    ,NO ,  -1.033E+00,   4.172E+00,   6.736E+00,,    -0.153
C,SR-85    ,NO ,   1.929E+01,   3.927E+00,   7.785E+00,,     2.478
C,Y-88     ,NO ,  -2.251E+00,   3.382E+00,   5.127E+00,,    -0.439
C,NB-94    ,NO ,   4.276E-02,   2.900E+00,   4.738E+00,,     0.009
C,NB-95    ,NO ,   2.844E+00,   3.274E+00,   5.754E+00,,     0.494
C,ZR-95    ,NO ,  -1.314E+00,   5.813E+00,   9.278E+00,,    -0.142
C,MO-99    ,NO ,   9.501E+00,   2.210E+02,   3.606E+02,,     0.026
C,RU-103   ,NO ,   6.266E-01,   3.759E+00,   6.163E+00,,     0.102
C,RU-106   ,NO ,  -3.601E+01,   3.219E+01,   4.764E+01,,    -0.756
C,AG-110m  ,NO ,   8.186E-01,   3.123E+00,   5.207E+00,,     0.157
C,SN-113   ,NO ,   5.835E-01,   4.023E+00,   6.677E+00,,     0.087
C,SB-124   ,NO ,  -3.400E+00,   8.794E+00,   5.624E+00,,    -0.604
C,SB-125   ,NO ,   4.873E+00,   8.763E+00,   1.480E+01,,     0.329
C,TE-129M  ,NO ,  -3.117E+01,   4.130E+01,   6.442E+01,,    -0.484
C,I-131    ,NO ,  -2.642E-01,   6.518E+00,   1.076E+01,,    -0.025
C,BA-133   ,NO ,   6.393E+00,   4.485E+00,   7.884E+00,,     0.811
C,CS-134   ,NO ,   1.230E+01,   5.489E+00,   6.095E+00,,     2.018
C,CS-136   ,NO ,   4.193E-01,   4.603E+00,   7.669E+00,,     0.055
C,CS-137   ,NO ,  -1.350E+00,   3.348E+00,   5.333E+00,,    -0.253
C,CE-139   ,NO ,   3.042E+00,   3.083E+00,   5.312E+00,,     0.573
C,BA-140   ,NO ,  -4.788E+00,   1.599E+01,   2.603E+01,,    -0.184
C,LA-140   ,NO ,  -1.246E+00,   5.529E+00,   8.854E+00,,    -0.141
C,CE-141   ,NO ,   5.071E-01,   6.858E+00,   9.497E+00,,     0.053
C,CE-144   ,NO ,  -2.019E+00,   2.787E+01,   3.847E+01,,    -0.052
C,EU-152   ,NO ,  -2.092E+01,   1.027E+01,   1.548E+01,,    -1.352
C,EU-154   ,NO ,   2.687E+00,   6.468E+00,   1.072E+01,,     0.251
C,RA-226   ,NO ,   1.110E+02,   7.866E+01,   1.378E+02,,     0.805
C,AC-228   ,NO ,   5.038E+00,   1.192E+01,   2.032E+01,,     0.248
C,TH-228   ,NO ,   4.236E+00,   6.790E+00,   1.019E+01,,     0.416
C,TH-232   ,NO ,   5.023E+00,   1.188E+01,   2.026E+01,,     0.248
C,U-235    ,NO ,   1.740E+01,   2.655E+01,   3.794E+01,,     0.459
C,U-238    ,NO ,  -5.083E+01,   3.610E+02,   5.823E+02,,    -0.087
C,AM-241   ,NO ,  -3.956E+01,   3.010E+01,   4.614E+01,,    -0.858
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 18:25:45.18
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 8-JUN-2006 12:14:05.20

LIMS No., Customer Name, Client ID: WG L28821-3 DRESDEN

Sample ID : 07L28821-3
Sample Type : WG
Quantity : 3.52840E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 13:50:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 02:25:27.59
Live time : 0 02:25:25.83

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	140.25*	97	247	1.58	281.18	2.09E+00	1.12E-02	33.3	2.35E+00
2	1	241.70	54	136	1.43	484.24	1.80E+00	6.20E-03	41.4	1.28E+00
3	1	296.19	83	230	7.36	593.27	1.60E+00	9.48E-03	43.2	3.69E+00
4	1	596.78	82	86	0.88	1194.73	9.95E-01	9.43E-03	24.5	1.84E+01
5	1	609.22*	47	64	1.65	1219.61	9.81E-01	5.41E-03	41.3	1.44E+00
6	1	1294.10	32	22	5.99	2589.33	5.62E-01	3.62E-03	35.5	1.97E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28821-3

Acquisition date : 8-JUN-2006 12:14:05

Total number of lines in spectrum	6	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	1	16.67%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28821-3 Acquisition date : 8-JUN-2006 12:14:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	140.25	97	247	1.58	281.18	276	10	1.12E-02	66.6	2.09E+00	
1	241.70	54	136	1.43	484.24	474	16	6.20E-03	82.8	1.80E+00	T
1	296.19	83	230	7.36	593.27	586	17	9.48E-03	86.4	1.60E+00	
1	596.78	82	86	0.88	1194.73	1188	13	9.43E-03	49.1	9.95E-01	
1	609.22	47	64	1.65	1219.61	1215	12	5.41E-03	82.6	9.81E-01	
1	1294.10	32	22	5.99	2589.33	2583	15	3.62E-03	71.1	5.62E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 6
Number of unidentified lines 5
Number of lines tentatively identified by NID 1 16.67%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.357E+01		2.907E+01	4.859E+01	0.000E+00	0.279
NA-24	-1.245E-03		3.392E-02	Half-Life too short		
K-40	4.904E+01		4.267E+01	8.281E+01	0.000E+00	0.592
CR-51	1.373E+00		2.993E+01	4.994E+01	0.000E+00	0.028
MN-54	3.298E-01		3.045E+00	5.071E+00	0.000E+00	0.065
CO-57	2.136E+00		3.125E+00	5.225E+00	0.000E+00	0.409
CO-58	-1.966E+00		3.172E+00	5.005E+00	0.000E+00	-0.393
FE-59	4.136E+00		6.211E+00	1.087E+01	0.000E+00	0.380
CO-60	-3.309E+00		3.030E+00	4.323E+00	0.000E+00	-0.765
ZN-65	3.563E+00		6.492E+00	1.123E+01	0.000E+00	0.317
SE-75	-1.033E+00		4.172E+00	6.736E+00	0.000E+00	-0.153
SR-85	1.929E+01		3.927E+00	7.785E+00	0.000E+00	2.478
Y-88	-2.251E+00		3.382E+00	5.127E+00	0.000E+00	-0.439
NB-94	4.276E-02		2.900E+00	4.738E+00	0.000E+00	0.009
NB-95	2.844E+00		3.274E+00	5.754E+00	0.000E+00	0.494
ZR-95	-1.314E+00		5.813E+00	9.278E+00	0.000E+00	-0.142
MO-99	9.501E+00		2.210E+02	3.606E+02	0.000E+00	0.026
RU-103	6.266E-01		3.759E+00	6.163E+00	0.000E+00	0.102
RU-106	-3.601E+01		3.219E+01	4.764E+01	0.000E+00	-0.756
AG-110m	8.186E-01		3.123E+00	5.207E+00	0.000E+00	0.157
SN-113	5.835E-01		4.023E+00	6.677E+00	0.000E+00	0.087
SB-124	-3.400E+00		8.794E+00	5.624E+00	0.000E+00	-0.604

SB-125	4.873E+00	8.763E+00	1.480E+01	0.000E+00	0.329
TE-129M	-3.117E+01	4.130E+01	6.442E+01	0.000E+00	-0.484
I-131	-2.642E-01	6.518E+00	1.076E+01	0.000E+00	-0.025
BA-133	6.393E+00	4.485E+00	7.884E+00	0.000E+00	0.811
CS-134	1.230E+01	5.489E+00	6.095E+00	0.000E+00	2.018
CS-136	4.193E-01	4.603E+00	7.669E+00	0.000E+00	0.055
CS-137	-1.350E+00	3.348E+00	5.333E+00	0.000E+00	-0.253
CE-139	3.042E+00	3.083E+00	5.312E+00	0.000E+00	0.573
BA-140	-4.788E+00	1.599E+01	2.603E+01	0.000E+00	-0.184
LA-140	-1.246E+00	5.529E+00	8.854E+00	0.000E+00	-0.141
CE-141	5.071E-01	6.858E+00	9.497E+00	0.000E+00	0.053
CE-144	-2.019E+00	2.787E+01	3.847E+01	0.000E+00	-0.052
EU-152	-2.092E+01	1.027E+01	1.548E+01	0.000E+00	-1.352
EU-154	2.687E+00	6.468E+00	1.072E+01	0.000E+00	0.251
RA-226	1.110E+02	7.866E+01	1.378E+02	0.000E+00	0.805
AC-228	5.038E+00	1.192E+01	2.032E+01	0.000E+00	0.248
TH-228	4.236E+00	6.790E+00	1.019E+01	0.000E+00	0.416
TH-232	5.023E+00	1.188E+01	2.026E+01	0.000E+00	0.248
U-235	1.740E+01	2.655E+01	3.794E+01	0.000E+00	0.459
U-238	-5.083E+01	3.610E+02	5.823E+02	0.000E+00	-0.087
AM-241	-3.956E+01	3.010E+01	4.614E+01	0.000E+00	-0.858

A,07L28821-3 ,06/08/2006 18:25,05/30/2006 13:50, 3.528E+00,WG L28821-3 DR
B,07L28821-3 ,LIBD ,06/07/2006 09:32,0735L090904

C,BE-7	,NO ,	1.357E+01,	2.907E+01,	4.859E+01,,	0.279
C,K-40	,NO ,	4.904E+01,	4.267E+01,	8.281E+01,,	0.592
C,CR-51	,NO ,	1.373E+00,	2.993E+01,	4.994E+01,,	0.028
C,MN-54	,NO ,	3.298E-01,	3.045E+00,	5.071E+00,,	0.065
C,CO-57	,NO ,	2.136E+00,	3.125E+00,	5.225E+00,,	0.409
C,CO-58	,NO ,	-1.966E+00,	3.172E+00,	5.005E+00,,	-0.393
C,FE-59	,NO ,	4.136E+00,	6.211E+00,	1.087E+01,,	0.380
C,CO-60	,NO ,	-3.309E+00,	3.030E+00,	4.323E+00,,	-0.765
C,ZN-65	,NO ,	3.563E+00,	6.492E+00,	1.123E+01,,	0.317
C,SE-75	,NO ,	-1.033E+00,	4.172E+00,	6.736E+00,,	-0.153
C,SR-85	,NO ,	1.929E+01,	3.927E+00,	7.785E+00,,	2.478
C,Y-88	,NO ,	-2.251E+00,	3.382E+00,	5.127E+00,,	-0.439
C,NB-94	,NO ,	4.276E-02,	2.900E+00,	4.738E+00,,	0.009
C,NB-95	,NO ,	2.844E+00,	3.274E+00,	5.754E+00,,	0.494
C,ZR-95	,NO ,	-1.314E+00,	5.813E+00,	9.278E+00,,	-0.142
C,MO-99	,NO ,	9.501E+00,	2.210E+02,	3.606E+02,,	0.026
C,RU-103	,NO ,	6.266E-01,	3.759E+00,	6.163E+00,,	0.102
C,RU-106	,NO ,	-3.601E+01,	3.219E+01,	4.764E+01,,	-0.756
C,AG-110m	,NO ,	8.186E-01,	3.123E+00,	5.207E+00,,	0.157
C,SN-113	,NO ,	5.835E-01,	4.023E+00,	6.677E+00,,	0.087
C,SB-124	,NO ,	-3.400E+00,	8.794E+00,	5.624E+00,,	-0.604
C,SB-125	,NO ,	4.873E+00,	8.763E+00,	1.480E+01,,	0.329
C,TE-129M	,NO ,	-3.117E+01,	4.130E+01,	6.442E+01,,	-0.484
C,I-131	,NO ,	-2.642E-01,	6.518E+00,	1.076E+01,,	-0.025
C,BA-133	,NO ,	6.393E+00,	4.485E+00,	7.884E+00,,	0.811
C,CS-134	,NO ,	1.230E+01,	5.489E+00,	6.095E+00,,	2.018
C,CS-136	,NO ,	4.193E-01,	4.603E+00,	7.669E+00,,	0.055
C,CS-137	,NO ,	-1.350E+00,	3.348E+00,	5.333E+00,,	-0.253
C,CE-139	,NO ,	3.042E+00,	3.083E+00,	5.312E+00,,	0.573
C,BA-140	,NO ,	-4.788E+00,	1.599E+01,	2.603E+01,,	-0.184
C,LA-140	,NO ,	-1.246E+00,	5.529E+00,	8.854E+00,,	-0.141
C,CE-141	,NO ,	5.071E-01,	6.858E+00,	9.497E+00,,	0.053
C,CE-144	,NO ,	-2.019E+00,	2.787E+01,	3.847E+01,,	-0.052
C,EU-152	,NO ,	-2.092E+01,	1.027E+01,	1.548E+01,,	-1.352
C,EU-154	,NO ,	2.687E+00,	6.468E+00,	1.072E+01,,	0.251
C,RA-226	,NO ,	1.110E+02,	7.866E+01,	1.378E+02,,	0.805
C,AC-228	,NO ,	5.038E+00,	1.192E+01,	2.032E+01,,	0.248
C,TH-228	,NO ,	4.236E+00,	6.790E+00,	1.019E+01,,	0.416
C,TH-232	,NO ,	5.023E+00,	1.188E+01,	2.026E+01,,	0.248
C,U-235	,NO ,	1.740E+01,	2.655E+01,	3.794E+01,,	0.459
C,U-238	,NO ,	-5.083E+01,	3.610E+02,	5.823E+02,,	-0.087
C,AM-241	,NO ,	-3.956E+01,	3.010E+01,	4.614E+01,,	-0.858

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 17:56:31.58
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 8-JUN-2006 14:48:24.56

LIMS No., Customer Name, Client ID: WG L28821-4 DRESDEN

Sample ID : 04L28821-4
Sample Type : WG
Quantity : 3.52240E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 15:50:00.
Geometry : 0435L090804
BKGFILE : 04BG060306MT
Real Time : 0 03:07:59.53
Live time : 0 03:07:57.58

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.33*	32	301	0.91	133.11	6.48E-01	2.87E-03	93.6	1.47E+00
2	1	139.82	89	351	1.34	280.07	1.82E+00	7.85E-03	42.6	7.77E-01
3	1	186.68	101	199	2.23	373.78	1.72E+00	8.95E-03	28.2	3.07E+00
4	1	198.35*	44	186	1.46	397.12	1.68E+00	3.91E-03	62.9	2.48E+00
5	1	238.54*	6	170	1.10	477.50	1.52E+00	5.10E-04	426.8	6.56E-01
6	1	294.67	76	136	2.21	589.73	1.32E+00	6.70E-03	31.1	3.77E+00
7	1	352.03*	15	167	1.55	704.42	1.17E+00	1.32E-03	187.6	2.03E+00
8	1	582.95*	6	65	1.85	1166.14	7.99E-01	5.27E-04	283.0	2.91E+00
9	1	596.13	51	82	1.62	1192.50	7.86E-01	4.52E-03	36.9	1.54E+00
10	1	608.90*	39	70	2.19	1218.03	7.73E-01	3.44E-03	54.0	1.06E+00
11	1	968.66	29	33	2.39	1937.25	5.39E-01	2.55E-03	50.1	1.41E+00
12	1	1161.19	41	12	6.30	2322.12	4.67E-01	3.60E-03	20.7	3.30E+00
13	1	1460.98*	42	13	3.33	2921.32	3.92E-01	3.72E-03	33.8	2.10E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	42	10.67*	3.920E-01	6.822E+01	6.822E+01	67.56
RA-226	186.21	101	3.28*	1.723E+00	1.214E+02	1.214E+02	56.36
TH-228	238.63	6	44.60*	1.521E+00	5.765E-01	5.817E-01	853.62
	240.98	------	3.95	1.511E+00	------ Line Not Found		------
TH-232	583.14	6	30.25	7.995E-01	1.674E+00	1.674E+00	566.06
	911.07	------	27.70*	5.657E-01	------ Line Not Found		------
	969.11	29	16.60	5.391E-01	2.184E+01	2.184E+01	100.29
U-235	143.76	------	10.50*	1.822E+00	------ Line Not Found		------
	163.35	------	4.70	1.796E+00	------ Line Not Found		------
	185.71	101	54.00	1.723E+00	7.376E+00	7.376E+00	56.36
	205.31	------	4.70	1.652E+00	------ Line Not Found		------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28821-4

Acquisition date : 8-JUN-2006 14:48:24

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.822E+01	6.822E+01	4.609E+01	67.56	
RA-226	1600.00Y	1.00	1.214E+02	1.214E+02	0.684E+02	56.36	
TH-228	1.91Y	1.01	5.765E-01	5.817E-01	49.65E-01	853.62	
TH-232	1.41E+10Y	1.00	1.674E+00	1.674E+00	9.473E+00	566.06	K
U-235	7.04E+08Y	1.00	7.376E+00	7.376E+00	4.157E+00	56.36	K
	Total Activity :		1.993E+02	1.993E+02			

Grand Total Activity : 1.993E+02 1.993E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28821-4

Acquisition date : 8-JUN-2006 14:48:24

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.33	32	301	0.91	133.11	130	7	2.87E-03	****	6.48E-01	
1	139.82	89	351	1.34	280.07	275	11	7.85E-03	85.2	1.82E+00	
1	198.35	44	186	1.46	397.12	394	8	3.91E-03	****	1.68E+00	
1	294.67	76	136	2.21	589.73	585	10	6.70E-03	62.2	1.32E+00	
1	352.03	15	167	1.55	704.42	700	12	1.32E-03	****	1.17E+00	
1	596.13	51	82	1.62	1192.50	1186	11	4.52E-03	73.9	7.86E-01	
1	608.90	39	70	2.19	1218.03	1213	14	3.44E-03	****	7.73E-01	
1	1161.19	41	12	6.30	2322.12	2315	11	3.60E-03	41.4	4.67E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.822E+01	6.822E+01	4.609E+01	67.56	
RA-226	1600.00Y	1.00	1.214E+02	1.214E+02	0.684E+02	56.36	
TH-228	1.91Y	1.01	5.765E-01	5.817E-01	49.65E-01	853.62	
TH-232	1.41E+10Y	1.00	4.851E+00	4.851E+00	8.695E+00	179.22	
	Total Activity :		1.951E+02	1.951E+02			

Grand Total Activity : 1.951E+02 1.951E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.822E+01	4.609E+01	4.123E+01	0.000E+00	1.655
RA-226	1.214E+02	6.844E+01	1.128E+02	0.000E+00	1.076
TH-228	5.817E-01	4.965E+00	8.392E+00	0.000E+00	0.069
TH-232	4.851E+00	8.695E+00	2.017E+01	0.000E+00	0.241

---- Non-Identified Nuclides ----

	Key-Line

Nuclide	Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.300E+01		2.537E+01	4.061E+01	0.000E+00	-0.320
NA-24	-2.937E-02		3.593E-02	Half-Life too short		
CR-51	-1.858E+01		3.126E+01	5.008E+01	0.000E+00	-0.371
MN-54	1.907E+00		3.020E+00	5.165E+00	0.000E+00	0.369
CO-57	-5.426E-01		2.683E+00	4.463E+00	0.000E+00	-0.122
CO-58	-1.154E+00		3.128E+00	4.964E+00	0.000E+00	-0.232
FE-59	4.446E+00		6.497E+00	1.126E+01	0.000E+00	0.395
CO-60	-4.097E-01		3.579E+00	5.774E+00	0.000E+00	-0.071
ZN-65	5.502E+00		6.635E+00	1.161E+01	0.000E+00	0.474
SE-75	-4.043E+00		4.053E+00	6.474E+00	0.000E+00	-0.625
SR-85	1.755E+01		3.940E+00	7.633E+00	0.000E+00	2.299
Y-88	1.139E+00		3.612E+00	6.131E+00	0.000E+00	0.186
NB-94	6.983E-01		2.930E+00	4.916E+00	0.000E+00	0.142
NB-95	1.072E+00		3.185E+00	5.357E+00	0.000E+00	0.200
ZR-95	-4.995E+00		5.570E+00	8.520E+00	0.000E+00	-0.586
MO-99	-7.060E+01		2.100E+02	3.370E+02	0.000E+00	-0.209
RU-103	1.391E+00		3.378E+00	5.701E+00	0.000E+00	0.244
RU-106	-9.418E+00		2.861E+01	4.388E+01	0.000E+00	-0.215
AG-110m	-4.334E-01		3.015E+00	4.959E+00	0.000E+00	-0.087
SN-113	-1.131E+00		3.911E+00	6.255E+00	0.000E+00	-0.181
SB-124	8.845E+00		4.751E+00	5.372E+00	0.000E+00	1.647
SB-125	-2.735E+00		7.875E+00	1.285E+01	0.000E+00	-0.213
TE-129M	1.341E+00		3.818E+01	6.339E+01	0.000E+00	0.021
I-131	-2.818E+00		6.318E+00	1.007E+01	0.000E+00	-0.280
BA-133	5.897E+00		4.475E+00	6.820E+00	0.000E+00	0.865
CS-134	6.209E+00		4.728E+00	5.588E+00	0.000E+00	1.111
CS-136	-1.900E+00		4.447E+00	7.006E+00	0.000E+00	-0.271
CS-137	7.714E-01		3.189E+00	5.377E+00	0.000E+00	0.143
CE-139	-2.828E+00		2.934E+00	4.685E+00	0.000E+00	-0.604
BA-140	-2.348E+00		1.627E+01	2.643E+01	0.000E+00	-0.089
LA-140	4.219E+00		5.108E+00	9.256E+00	0.000E+00	0.456
CE-141	-2.771E-02		6.410E+00	9.103E+00	0.000E+00	-0.003
CE-144	1.344E+01		2.465E+01	3.609E+01	0.000E+00	0.372
EU-152	-1.227E+01		1.093E+01	1.451E+01	0.000E+00	-0.846
EU-154	-5.565E-01		5.603E+00	9.348E+00	0.000E+00	-0.060
AC-228	-3.652E+00		1.247E+01	2.023E+01	0.000E+00	-0.181
U-235	6.627E+00		2.434E+01	3.506E+01	0.000E+00	0.189
U-238	3.875E+02		3.282E+02	5.927E+02	0.000E+00	0.654
AM-241	-3.420E+01		2.626E+01	3.941E+01	0.000E+00	-0.868

A,04L28821-4 ,06/08/2006 17:56,05/30/2006 15:50, 3.522E+00,WG L28821-4 DR
B,04L28821-4 ,LIBD ,06/02/2006 09:04,0435L090804

C,K-40	,YES,	6.822E+01,	4.609E+01,	4.123E+01,,	1.655
C,RA-226	,YES,	1.214E+02,	6.844E+01,	1.128E+02,,	1.076
C,TH-228	,YES,	5.817E-01,	4.965E+00,	8.392E+00,,	0.069
C,TH-232	,YES,	4.851E+00,	8.695E+00,	2.017E+01,,	0.241
C,BE-7	,NO ,	-1.300E+01,	2.537E+01,	4.061E+01,,	-0.320
C,CR-51	,NO ,	-1.858E+01,	3.126E+01,	5.008E+01,,	-0.371
C,MN-54	,NO ,	1.907E+00,	3.020E+00,	5.165E+00,,	0.369
C,CO-57	,NO ,	-5.426E-01,	2.683E+00,	4.463E+00,,	-0.122
C,CO-58	,NO ,	-1.154E+00,	3.128E+00,	4.964E+00,,	-0.232
C,FE-59	,NO ,	4.446E+00,	6.497E+00,	1.126E+01,,	0.395
C,CO-60	,NO ,	-4.097E-01,	3.579E+00,	5.774E+00,,	-0.071
C,ZN-65	,NO ,	5.502E+00,	6.635E+00,	1.161E+01,,	0.474
C,SE-75	,NO ,	-4.043E+00,	4.053E+00,	6.474E+00,,	-0.625
C,SR-85	,NO ,	1.755E+01,	3.940E+00,	7.633E+00,,	2.299
C,Y-88	,NO ,	1.139E+00,	3.612E+00,	6.131E+00,,	0.186
C,NB-94	,NO ,	6.983E-01,	2.930E+00,	4.916E+00,,	0.142
C,NB-95	,NO ,	1.072E+00,	3.185E+00,	5.357E+00,,	0.200
C,ZR-95	,NO ,	-4.995E+00,	5.570E+00,	8.520E+00,,	-0.586
C,MO-99	,NO ,	-7.060E+01,	2.100E+02,	3.370E+02,,	-0.209
C,RU-103	,NO ,	1.391E+00,	3.378E+00,	5.701E+00,,	0.244
C,RU-106	,NO ,	-9.418E+00,	2.861E+01,	4.388E+01,,	-0.215
C,AG-110m	,NO ,	-4.334E-01,	3.015E+00,	4.959E+00,,	-0.087
C,SN-113	,NO ,	-1.131E+00,	3.911E+00,	6.255E+00,,	-0.181
C,SB-124	,NO ,	8.845E+00,	4.751E+00,	5.372E+00,,	1.647
C,SB-125	,NO ,	-2.735E+00,	7.875E+00,	1.285E+01,,	-0.213
C,TE-129M	,NO ,	1.341E+00,	3.818E+01,	6.339E+01,,	0.021
C,I-131	,NO ,	-2.818E+00,	6.318E+00,	1.007E+01,,	-0.280
C,BA-133	,NO ,	5.897E+00,	4.475E+00,	6.820E+00,,	0.865
C,CS-134	,NO ,	6.209E+00,	4.728E+00,	5.588E+00,,	1.111
C,CS-136	,NO ,	-1.900E+00,	4.447E+00,	7.006E+00,,	-0.271
C,CS-137	,NO ,	7.714E-01,	3.189E+00,	5.377E+00,,	0.143
C,CE-139	,NO ,	-2.828E+00,	2.934E+00,	4.685E+00,,	-0.604
C,BA-140	,NO ,	-2.348E+00,	1.627E+01,	2.643E+01,,	-0.089
C,LA-140	,NO ,	4.219E+00,	5.108E+00,	9.256E+00,,	0.456
C,CE-141	,NO ,	-2.771E-02,	6.410E+00,	9.103E+00,,	-0.003
C,CE-144	,NO ,	1.344E+01,	2.465E+01,	3.609E+01,,	0.372
C,EU-152	,NO ,	-1.227E+01,	1.093E+01,	1.451E+01,,	-0.846
C,EU-154	,NO ,	-5.565E-01,	5.603E+00,	9.348E+00,,	-0.060
C,AC-228	,NO ,	-3.652E+00,	1.247E+01,	2.023E+01,,	-0.181
C,U-235	,NO ,	6.627E+00,	2.434E+01,	3.506E+01,,	0.189
C,U-238	,NO ,	3.875E+02,	3.282E+02,	5.927E+02,,	0.654
C,AM-241	,NO ,	-3.420E+01,	2.626E+01,	3.941E+01,,	-0.868

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 17:52:03.07
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 8-JUN-2006 14:48:32.10

LIMS No., Customer Name, Client ID: WG L28821-5 DRESDEN

Sample ID : 07L28821-5
Sample Type : WG
Quantity : 3.63310E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 10:15:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 03:03:27.08
Live time : 0 03:03:24.89

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.39*	84	314	1.52	133.36	7.27E-01	7.61E-03	40.0	6.44E-01
2	1	139.98*	85	333	1.12	280.65	2.09E+00	7.69E-03	43.7	8.42E-01
3	1	596.20	70	85	2.54	1193.56	9.96E-01	6.35E-03	29.7	9.95E-01
4	1	609.14*	43	92	1.59	1219.47	9.81E-01	3.88E-03	52.8	6.61E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28821-5

Acquisition date : 8-JUN-2006 14:48:32

Total number of lines in spectrum	4	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28821-5

Acquisition date : 8-JUN-2006 14:48:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.39	84	314	1.52	133.36	130	8	7.61E-03	79.9	7.27E-01	
1	139.98	85	333	1.12	280.65	275	10	7.69E-03	87.4	2.09E+00	
1	596.20	70	85	2.54	1193.56	1188	13	6.35E-03	59.4	9.96E-01	
1	609.14	43	92	1.59	1219.47	1216	13	3.88E-03	****	9.81E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 4
Number of unidentified lines 4
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.612E+00		2.609E+01	4.271E+01	0.000E+00	0.061
NA-24	-2.207E+01		1.037E+01	Half-Life too short		
K-40	3.620E+01		3.845E+01	7.197E+01	0.000E+00	0.503
CR-51	-2.608E+01		3.062E+01	4.922E+01	0.000E+00	-0.530
MN-54	-2.517E-01		2.574E+00	4.225E+00	0.000E+00	-0.060
CO-57	8.776E-01		2.679E+00	4.424E+00	0.000E+00	0.198
CO-58	1.535E-01		2.796E+00	4.647E+00	0.000E+00	0.033
FE-59	4.725E+00		6.014E+00	1.054E+01	0.000E+00	0.448
CO-60	1.091E+00		2.855E+00	4.819E+00	0.000E+00	0.226
ZN-65	6.318E+00		5.778E+00	1.031E+01	0.000E+00	0.613
SE-75	-1.888E+00		3.865E+00	6.192E+00	0.000E+00	-0.305
SR-85	1.970E+01		3.576E+00	7.093E+00	0.000E+00	2.778
Y-88	-4.436E-01		2.934E+00	4.775E+00	0.000E+00	-0.093
NB-94	9.322E-01		2.731E+00	4.544E+00	0.000E+00	0.205
NB-95	-6.230E-01		2.688E+00	4.396E+00	0.000E+00	-0.142
ZR-95	1.024E-01		5.026E+00	8.173E+00	0.000E+00	0.013
MO-99	9.184E+01		7.102E+02	1.165E+03	0.000E+00	0.079
RU-103	-1.301E+00		3.419E+00	5.441E+00	0.000E+00	-0.239
RU-106	-1.838E+00		2.508E+01	4.108E+01	0.000E+00	-0.045
AG-110m	1.662E+00		2.678E+00	4.551E+00	0.000E+00	0.365
SN-113	-1.012E+00		3.736E+00	6.077E+00	0.000E+00	-0.166
SB-124	5.158E+00		5.565E+00	4.869E+00	0.000E+00	1.060
SB-125	2.740E+00		7.813E+00	1.302E+01	0.000E+00	0.211
TE-129M	1.473E+01		3.885E+01	6.465E+01	0.000E+00	0.228

I-131	1.088E+00	8.685E+00	1.444E+01	0.000E+00	0.075
BA-133	5.219E+00	3.673E+00	6.434E+00	0.000E+00	0.811
CS-134	9.473E+00	4.734E+00	4.934E+00	0.000E+00	1.920
CS-136	-3.303E+00	5.152E+00	8.140E+00	0.000E+00	-0.406
CS-137	5.839E-01	2.880E+00	4.777E+00	0.000E+00	0.122
CE-139	-3.138E-02	2.636E+00	4.396E+00	0.000E+00	-0.007
BA-140	-2.196E+01	1.854E+01	2.863E+01	0.000E+00	-0.767
LA-140	1.976E+00	6.651E+00	1.123E+01	0.000E+00	0.176
CE-141	3.474E+00	6.965E+00	9.832E+00	0.000E+00	0.353
CE-144	-6.202E+00	2.453E+01	3.358E+01	0.000E+00	-0.185
EU-152	-1.343E+01	8.305E+00	1.283E+01	0.000E+00	-1.046
EU-154	2.582E+00	5.483E+00	9.090E+00	0.000E+00	0.284
RA-226	-5.825E+01	6.577E+01	1.068E+02	0.000E+00	-0.545
AC-228	6.651E-01	1.041E+01	1.709E+01	0.000E+00	0.039
TH-228	1.579E+00	4.978E+00	8.340E+00	0.000E+00	0.189
TH-232	6.620E-01	1.036E+01	1.701E+01	0.000E+00	0.039
U-235	1.429E+01	2.407E+01	3.413E+01	0.000E+00	0.419
U-238	-2.001E+02	2.813E+02	4.323E+02	0.000E+00	-0.463
AM-241	-4.068E+01	2.722E+01	3.793E+01	0.000E+00	-1.072

A,07L28821-5 ,06/08/2006 17:52,05/25/2006 10:15, 3.633E+00,WG L28821-5 DR
B,07L28821-5 ,LIBD ,06/07/2006 09:32,0735L090904

C,BE-7	,NO ,	2.612E+00,	2.609E+01,	4.271E+01,,	0.061
C,K-40	,NO ,	3.620E+01,	3.845E+01,	7.197E+01,,	0.503
C,CR-51	,NO ,	-2.608E+01,	3.062E+01,	4.922E+01,,	-0.530
C,MN-54	,NO ,	-2.517E-01,	2.574E+00,	4.225E+00,,	-0.060
C,CO-57	,NO ,	8.776E-01,	2.679E+00,	4.424E+00,,	0.198
C,CO-58	,NO ,	1.535E-01,	2.796E+00,	4.647E+00,,	0.033
C,FE-59	,NO ,	4.725E+00,	6.014E+00,	1.054E+01,,	0.448
C,CO-60	,NO ,	1.091E+00,	2.855E+00,	4.819E+00,,	0.226
C,ZN-65	,NO ,	6.318E+00,	5.778E+00,	1.031E+01,,	0.613
C,SE-75	,NO ,	-1.888E+00,	3.865E+00,	6.192E+00,,	-0.305
C,SR-85	,NO ,	1.970E+01,	3.576E+00,	7.093E+00,,	2.778
C,Y-88	,NO ,	-4.436E-01,	2.934E+00,	4.775E+00,,	-0.093
C,NB-94	,NO ,	9.322E-01,	2.731E+00,	4.544E+00,,	0.205
C,NB-95	,NO ,	-6.230E-01,	2.688E+00,	4.396E+00,,	-0.142
C,ZR-95	,NO ,	1.024E-01,	5.026E+00,	8.173E+00,,	0.013
C,MO-99	,NO ,	9.184E+01,	7.102E+02,	1.165E+03,,	0.079
C,RU-103	,NO ,	-1.301E+00,	3.419E+00,	5.441E+00,,	-0.239
C,RU-106	,NO ,	-1.838E+00,	2.508E+01,	4.108E+01,,	-0.045
C,AG-110m	,NO ,	1.662E+00,	2.678E+00,	4.551E+00,,	0.365
C,SN-113	,NO ,	-1.012E+00,	3.736E+00,	6.077E+00,,	-0.166
C,SB-124	,NO ,	5.158E+00,	5.565E+00,	4.869E+00,,	1.060
C,SB-125	,NO ,	2.740E+00,	7.813E+00,	1.302E+01,,	0.211
C,TE-129M	,NO ,	1.473E+01,	3.885E+01,	6.465E+01,,	0.228
C,I-131	,NO ,	1.088E+00,	8.685E+00,	1.444E+01,,	0.075
C,BA-133	,NO ,	5.219E+00,	3.673E+00,	6.434E+00,,	0.811
C,CS-134	,NO ,	9.473E+00,	4.734E+00,	4.934E+00,,	1.920
C,CS-136	,NO ,	-3.303E+00,	5.152E+00,	8.140E+00,,	-0.406
C,CS-137	,NO ,	5.839E-01,	2.880E+00,	4.777E+00,,	0.122
C,CE-139	,NO ,	-3.138E-02,	2.636E+00,	4.396E+00,,	-0.007
C,BA-140	,NO ,	-2.196E+01,	1.854E+01,	2.863E+01,,	-0.767
C,LA-140	,NO ,	1.976E+00,	6.651E+00,	1.123E+01,,	0.176
C,CE-141	,NO ,	3.474E+00,	6.965E+00,	9.832E+00,,	0.353
C,CE-144	,NO ,	-6.202E+00,	2.453E+01,	3.358E+01,,	-0.185
C,EU-152	,NO ,	-1.343E+01,	8.305E+00,	1.283E+01,,	-1.046
C,EU-154	,NO ,	2.582E+00,	5.483E+00,	9.090E+00,,	0.284
C,RA-226	,NO ,	-5.825E+01,	6.577E+01,	1.068E+02,,	-0.545
C,AC-228	,NO ,	6.651E-01,	1.041E+01,	1.709E+01,,	0.039
C,TH-228	,NO ,	1.579E+00,	4.978E+00,	8.340E+00,,	0.189
C,TH-232	,NO ,	6.620E-01,	1.036E+01,	1.701E+01,,	0.039
C,U-235	,NO ,	1.429E+01,	2.407E+01,	3.413E+01,,	0.419
C,U-238	,NO ,	-2.001E+02,	2.813E+02,	4.323E+02,,	-0.463
C,AM-241	,NO ,	-4.068E+01,	2.722E+01,	3.793E+01,,	-1.072

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 18:19:33.94
TBE10 12892256 HpGe ********** Aquisition Date/Time: 8-JUN-2006 14:48:38.19

LIMS No., Customer Name, Client ID: WG L28821-6 DRESDEN

Sample ID : 10L28821-6
Sample Type : WG
Quantity : 3.63120E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 15:00:00.
Geometry : 1035L091004
BKGFILE : 10BG060306MT
Real Time : 0 03:30:43.89
Live time : 0 03:30:41.63

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.46*	92	377	1.27	132.03	6.38E-01	7.26E-03	39.9	2.38E+00
2	1	92.77*	7	423	1.42	184.67	1.30E+00	5.32E-04	601.2	7.24E-01
3	1	139.47	62	285	0.89	278.12	1.68E+00	4.93E-03	45.0	1.63E+00
4	1	596.21	73	53	1.45	1192.10	7.06E-01	5.80E-03	22.1	1.29E+00
5	1	609.50*	42	58	1.67	1218.70	6.94E-01	3.29E-03	49.4	1.08E+00
6	1	911.09*	13	37	2.56	1822.31	5.07E-01	1.05E-03	102.5	1.79E+00
7	1	1120.26*	24	11	2.40	2241.01	4.33E-01	1.87E-03	41.3	7.92E-01
8	1	1461.19*	27	21	2.89	2923.55	3.56E-01	2.12E-03	57.0	1.89E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	27	10.67*	3.558E-01	4.158E+01	4.158E+01	114.02
AC-228	835.50	------	1.75	5.422E-01	------	Line Not Found	------
	911.07	13	27.70*	5.070E-01	5.578E+00	5.604E+00	205.09

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28821-6

Acquisition date : 8-JUN-2006 14:48:38

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.158E+01	4.158E+01	4.741E+01	114.02	
AC-228	5.75Y	1.00	5.578E+00	5.604E+00	11.49E+00	205.09	
	Total Activity :		4.716E+01	4.718E+01			
	Grand Total Activity :		4.716E+01	4.718E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28821-6

Acquisition date : 8-JUN-2006 14:48:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.46	92	377	1.27	132.03	128	8	7.26E-03	79.8	6.38E-01	
1	92.77	7	423	1.42	184.67	180	9	5.32E-04	****	1.30E+00	
1	139.47	62	285	0.89	278.12	275	6	4.93E-03	90.0	1.68E+00	
1	596.21	73	53	1.45	1192.10	1186	10	5.80E-03	44.3	7.06E-01	
1	609.50	42	58	1.67	1218.70	1212	15	3.29E-03	98.9	6.94E-01	
1	1120.26	24	11	2.40	2241.01	2237	9	1.87E-03	82.6	4.33E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.158E+01	4.158E+01	4.741E+01	114.02	
AC-228	5.75Y	1.00	5.578E+00	5.604E+00	11.49E+00	205.09	
	Total Activity :		4.716E+01	4.718E+01			

Grand Total Activity : 4.716E+01 4.718E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.158E+01	4.741E+01	5.186E+01	0.000E+00	0.802
AC-228	5.604E+00	1.149E+01	1.810E+01	0.000E+00	0.310

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.694E+01		3.328E+01	5.727E+01	0.000E+00	0.470
NA-24	-7.261E-01		1.029E+01	Half-Life too short		
CR-51	-4.158E+01		3.843E+01	6.054E+01	0.000E+00	-0.687

Unidentified Energy Lines
Sample ID : 10L28821-6 Acquisition date : 8-JUN-2006 14:48:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.46	92	377	1.27	132.03	128	8	7.26E-03	79.8	6.38E-01	
1	92.77	7	423	1.42	184.67	180	9	5.32E-04	****	1.30E+00	
1	139.47	62	285	0.89	278.12	275	6	4.93E-03	90.0	1.68E+00	
1	596.21	73	53	1.45	1192.10	1186	10	5.80E-03	44.3	7.06E-01	
1	609.50	42	58	1.67	1218.70	1212	15	3.29E-03	98.9	6.94E-01	
1	1120.26	24	11	2.40	2241.01	2237	9	1.87E-03	82.6	4.33E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.158E+01	4.158E+01	4.741E+01	114.02	
AC-228	5.75Y	1.00	5.578E+00	5.604E+00	11.49E+00	205.09	
	Total Activity :		4.716E+01	4.718E+01			

Grand Total Activity : 4.716E+01 4.718E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.158E+01	4.741E+01	5.186E+01	0.000E+00	0.802
AC-228	5.604E+00	1.149E+01	1.810E+01	0.000E+00	0.310

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.694E+01		3.328E+01	5.727E+01	0.000E+00	0.470
NA-24	-7.261E-01		1.029E+01	Half-Life too short		
CR-51	-4.158E+01		3.843E+01	6.054E+01	0.000E+00	-0.687

MN-54	2.145E-01	3.209E+00	5.320E+00	0.000E+00	0.040
CO-57	-2.131E+00	3.509E+00	5.717E+00	0.000E+00	-0.373
CO-58	-3.748E+00	3.496E+00	5.337E+00	0.000E+00	-0.702
FE-59	7.956E+00	7.231E+00	1.300E+01	0.000E+00	0.612
CO-60	-1.019E+00	3.098E+00	4.908E+00	0.000E+00	-0.208
ZN-65	8.487E+00	7.953E+00	1.247E+01	0.000E+00	0.681
SE-75	-2.198E+00	4.510E+00	7.351E+00	0.000E+00	-0.299
SR-85	2.000E+01	4.283E+00	8.290E+00	0.000E+00	2.413
Y-88	-4.873E-01	4.025E+00	6.506E+00	0.000E+00	-0.075
NB-94	-1.387E+00	3.099E+00	4.894E+00	0.000E+00	-0.283
NB-95	4.340E+00	3.609E+00	6.424E+00	0.000E+00	0.676
ZR-95	-4.212E+00	6.177E+00	9.777E+00	0.000E+00	-0.431
MO-99	5.424E+02	7.599E+02	1.322E+03	0.000E+00	0.410
RU-103	3.523E+00	4.201E+00	7.231E+00	0.000E+00	0.487
RU-106	-4.038E+00	3.151E+01	4.816E+01	0.000E+00	-0.084
AG-110m	-9.944E-01	3.057E+00	4.881E+00	0.000E+00	-0.204
SN-113	-2.255E+00	4.538E+00	7.230E+00	0.000E+00	-0.312
SB-124	1.770E+00	7.460E+00	5.534E+00	0.000E+00	0.320
SB-125	-6.602E+00	9.605E+00	1.507E+01	0.000E+00	-0.438
TE-129M	-2.562E+01	4.584E+01	7.405E+01	0.000E+00	-0.346
I-131	2.244E+00	1.042E+01	1.721E+01	0.000E+00	0.130
BA-133	6.620E+00	4.651E+00	8.047E+00	0.000E+00	0.823
CS-134	5.101E+00	5.022E+00	5.530E+00	0.000E+00	0.922
CS-136	4.503E+00	6.493E+00	1.122E+01	0.000E+00	0.401
CS-137	3.804E+00	3.185E+00	5.608E+00	0.000E+00	0.678
CE-139	3.310E-01	3.472E+00	5.702E+00	0.000E+00	0.058
BA-140	-1.743E+01	2.345E+01	3.705E+01	0.000E+00	-0.470
LA-140	7.099E+00	7.788E+00	1.399E+01	0.000E+00	0.507
CE-141	7.111E+00	8.740E+00	1.259E+01	0.000E+00	0.565
CE-144	-9.112E+00	3.130E+01	4.337E+01	0.000E+00	-0.210
EU-152	-1.235E+01	1.080E+01	1.691E+01	0.000E+00	-0.730
EU-154	2.200E+00	7.118E+00	1.186E+01	0.000E+00	0.186
RA-226	-4.651E+01	8.397E+01	1.325E+02	0.000E+00	-0.351
TH-228	5.623E-01	6.302E+00	1.037E+01	0.000E+00	0.054
TH-232	5.578E+00	+ 1.144E+01	2.024E+01	0.000E+00	0.276
U-235	2.620E+01	3.003E+01	4.336E+01	0.000E+00	0.604
U-238	-2.172E+01	3.283E+02	5.331E+02	0.000E+00	-0.041
AM-241	-3.348E+01	3.396E+01	4.712E+01	0.000E+00	-0.711

```
A,10L28821-6       ,06/08/2006 18:19,05/25/2006 15:00,   3.631E+00,WG L28821-6 DR
B,10L28821-6       ,LIBD                ,06/07/2006 09:32,1035L091004
C,K-40     ,YES,    4.158E+01,   4.741E+01,   5.186E+01,,     0.802
C,AC-228   ,YES,    5.604E+00,   1.149E+01,   1.810E+01,,     0.310
C,BE-7     ,NO ,    2.694E+01,   3.328E+01,   5.727E+01,,     0.470
C,CR-51    ,NO ,   -4.158E+01,   3.843E+01,   6.054E+01,,    -0.687
C,MN-54    ,NO ,    2.145E-01,   3.209E+00,   5.320E+00,,     0.040
C,CO-57    ,NO ,   -2.131E+00,   3.509E+00,   5.717E+00,,    -0.373
C,CO-58    ,NO ,   -3.748E+00,   3.496E+00,   5.337E+00,,    -0.702
C,FE-59    ,NO ,    7.956E+00,   7.231E+00,   1.300E+01,,     0.612
C,CO-60    ,NO ,   -1.019E+00,   3.098E+00,   4.908E+00,,    -0.208
C,ZN-65    ,NO ,    8.487E+00,   7.953E+00,   1.247E+01,,     0.681
C,SE-75    ,NO ,   -2.198E+00,   4.510E+00,   7.351E+00,,    -0.299
C,SR-85    ,NO ,    2.000E+01,   4.283E+00,   8.290E+00,,     2.413
C,Y-88     ,NO ,   -4.873E-01,   4.025E+00,   6.506E+00,,    -0.075
C,NB-94    ,NO ,   -1.387E+00,   3.099E+00,   4.894E+00,,    -0.283
C,NB-95    ,NO ,    4.340E+00,   3.609E+00,   6.424E+00,,     0.676
C,ZR-95    ,NO ,   -4.212E+00,   6.177E+00,   9.777E+00,,    -0.431
C,MO-99    ,NO ,    5.424E+02,   7.599E+02,   1.322E+03,,     0.410
C,RU-103   ,NO ,    3.523E+00,   4.201E+00,   7.231E+00,,     0.487
C,RU-106   ,NO ,   -4.038E+00,   3.151E+01,   4.816E+01,,    -0.084
C,AG-110m  ,NO ,   -9.944E-01,   3.057E+00,   4.881E+00,,    -0.204
C,SN-113   ,NO ,   -2.255E+00,   4.538E+00,   7.230E+00,,    -0.312
C,SB-124   ,NO ,    1.770E+00,   7.460E+00,   5.534E+00,,     0.320
C,SB-125   ,NO ,   -6.602E+00,   9.605E+00,   1.507E+01,,    -0.438
C,TE-129M  ,NO ,   -2.562E+01,   4.584E+01,   7.405E+01,,    -0.346
C,I-131    ,NO ,    2.244E+00,   1.042E+01,   1.721E+01,,     0.130
C,BA-133   ,NO ,    6.620E+00,   4.651E+00,   8.047E+00,,     0.823
C,CS-134   ,NO ,    5.101E+00,   5.022E+00,   5.530E+00,,     0.922
C,CS-136   ,NO ,    4.503E+00,   6.493E+00,   1.122E+01,,     0.401
C,CS-137   ,NO ,    3.804E+00,   3.185E+00,   5.608E+00,,     0.678
C,CE-139   ,NO ,    3.310E-01,   3.472E+00,   5.702E+00,,     0.058
C,BA-140   ,NO ,   -1.743E+01,   2.345E+01,   3.705E+01,,    -0.470
C,LA-140   ,NO ,    7.099E+00,   7.788E+00,   1.399E+01,,     0.507
C,CE-141   ,NO ,    7.111E+00,   8.740E+00,   1.259E+01,,     0.565
C,CE-144   ,NO ,   -9.112E+00,   3.130E+01,   4.337E+01,,    -0.210
C,EU-152   ,NO ,   -1.235E+01,   1.080E+01,   1.691E+01,,    -0.730
C,EU-154   ,NO ,    2.200E+00,   7.118E+00,   1.186E+01,,     0.186
C,RA-226   ,NO ,   -4.651E+01,   8.397E+01,   1.325E+02,,    -0.351
C,TH-228   ,NO ,    5.623E-01,   6.302E+00,   1.037E+01,,     0.054
C,TH-232   ,NO ,    5.578E+00,   1.144E+01,   2.024E+01,,     0.276
C,U-235    ,NO ,    2.620E+01,   3.003E+01,   4.336E+01,,     0.604
C,U-238    ,NO ,   -2.172E+01,   3.283E+02,   5.331E+02,,    -0.041
C,AM-241   ,NO ,   -3.348E+01,   3.396E+01,   4.712E+01,,    -0.711
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 18:14:50.69
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 8-JUN-2006 14:48:40.21

LIMS No., Customer Name, Client ID: WG L28821-7 DRESDEN

Sample ID : 11L28821-7
Sample Type : WG
Quantity : 3.63330E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 17:00:00.
Geometry : 1135L090204
BKGFILE : 11BG060306MT
Real Time : 0 03:26:06.91
Live time : 0 03:26:02.48

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	93.13*	53	321	2.11	185.43	1.28E+00	4.31E-03	68.2	
2	0	139.62*	119	322	1.61	278.67	1.69E+00	9.61E-03	31.3	
3	0	185.56*	15	268	1.22	370.80	1.62E+00	1.21E-03	216.2	
4	0	198.42	86	315	1.40	396.60	1.57E+00	6.98E-03	40.2	
5	0	239.31*	6	373	0.64	478.58	1.42E+00	5.10E-04	708.8	
6	0	351.68*	104	146	1.15	703.82	1.08E+00	8.44E-03	27.9	
7	0	609.50*	69	101	1.69	1220.26	7.02E-01	5.59E-03	36.2	
8	0	912.66	69	45	1.73	1826.92	5.13E-01	5.61E-03	26.5	
9	0	966.49	46	55	4.80	1934.56	4.91E-01	3.72E-03	43.6	
10	0	1323.58	14	6	1.36	2648.14	3.83E-01	1.13E-03	38.5	
11	0	1461.04*	37	25	2.26	2922.57	3.54E-01	3.01E-03	44.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	37	10.67*	3.539E-01	5.922E+01	5.922E+01	89.01
RA-226	186.21	15	3.28*	1.616E+00	1.705E+01	1.705E+01	432.49
TH-228	238.63	6	44.60*	1.419E+00	6.001E-01	6.084E-01	1417.52
	240.98	------	3.95	1.413E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.695E+00	------	Line Not Found	------
	163.35	------	4.70	1.678E+00	------	Line Not Found	------
	185.71	15	54.00	1.616E+00	1.035E+00	1.035E+00	432.49
	205.31	------	4.70	1.546E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28821-7

Acquisition date : 8-JUN-2006 14:48:40

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.922E+01	5.922E+01	5.272E+01	89.01	
RA-226	1600.00Y	1.00	1.705E+01	1.705E+01	7.372E+01	432.49	
TH-228	1.91Y	1.01	6.001E-01	6.084E-01	86.25E-01	1417.52	
U-235	7.04E+08Y	1.00	1.035E+00	1.035E+00	4.478E+00	432.49	K
	Total Activity :		7.791E+01	7.791E+01			

Grand Total Activity : 7.791E+01 7.791E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28821-7

Acquisition date : 8-JUN-2006 14:48:40

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	93.13	53	321	2.11	185.43	181	9	4.31E-03	****	1.28E+00	
0	139.62	119	322	1.61	278.67	273	10	9.61E-03	62.6	1.69E+00	
0	198.42	86	315	1.40	396.60	392	10	6.98E-03	80.3	1.57E+00	
0	351.68	104	146	1.15	703.82	697	13	8.44E-03	55.7	1.08E+00	
0	609.50	69	101	1.69	1220.26	1214	15	5.59E-03	72.4	7.02E-01	
0	912.66	69	45	1.73	1826.92	1817	20	5.61E-03	53.1	5.13E-01	
0	966.49	46	55	4.80	1934.56	1921	22	3.72E-03	87.3	4.91E-01	
0	1323.58	14	6	1.36	2648.14	2645	6	1.13E-03	76.9	3.83E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.922E+01	5.922E+01	5.272E+01	89.01	
RA-226	1600.00Y	1.00	1.705E+01	1.705E+01	7.372E+01	432.49	
TH-228	1.91Y	1.01	6.001E-01	6.084E-01	86.25E-01	1417.52	
	Total Activity :		7.687E+01	7.688E+01			

Grand Total Activity : 7.687E+01 7.688E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.922E+01	5.272E+01	5.044E+01	0.000E+00	1.174
RA-226	1.705E+01	7.372E+01	1.238E+02	0.000E+00	0.138
TH-228	6.084E-01	8.625E+00	9.289E+00	0.000E+00	0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	1.727E+01	3.171E+01	5.321E+01	0.000E+00	0.324
NA-24	-5.056E+00	8.849E+00	Half-Life too short		
CR-51	-8.651E+00	3.777E+01	6.193E+01	0.000E+00	-0.140
MN-54	3.116E+00	2.971E+00	5.244E+00	0.000E+00	0.594
CO-57	2.087E-01	3.181E+00	5.254E+00	0.000E+00	0.040
CO-58	-9.985E-01	3.394E+00	5.444E+00	0.000E+00	-0.183
FE-59	-9.012E+00	7.022E+00	1.032E+01	0.000E+00	-0.873
CO-60	1.188E+00	3.392E+00	5.244E+00	0.000E+00	0.227
ZN-65	4.750E+00	7.315E+00	1.268E+01	0.000E+00	0.375
SE-75	-5.862E+00	4.397E+00	6.961E+00	0.000E+00	-0.842
SR-85	1.880E+01	4.272E+00	8.156E+00	0.000E+00	2.305
Y-88	-2.580E-01	3.823E+00	6.247E+00	0.000E+00	-0.041
NB-94	-1.640E+00	3.116E+00	4.975E+00	0.000E+00	-0.330
NB-95	-1.842E+00	3.546E+00	5.621E+00	0.000E+00	-0.328
ZR-95	-2.153E+00	6.087E+00	9.760E+00	0.000E+00	-0.221
MO-99	-1.340E+02	7.369E+02	1.197E+03	0.000E+00	-0.112
RU-103	3.732E+00	4.011E+00	6.858E+00	0.000E+00	0.544
RU-106	2.906E+01	3.109E+01	5.177E+01	0.000E+00	0.561
AG-110m	-1.240E+00	3.059E+00	4.928E+00	0.000E+00	-0.252
SN-113	1.872E+00	4.316E+00	7.237E+00	0.000E+00	0.259
SB-124	-2.281E+00	4.565E+00	6.149E+00	0.000E+00	-0.371
SB-125	-2.123E+00	8.975E+00	1.453E+01	0.000E+00	-0.146
TE-129M	-5.803E+00	4.634E+01	7.522E+01	0.000E+00	-0.077
I-131	4.818E+00	1.022E+01	1.720E+01	0.000E+00	0.280
BA-133	6.163E+00	5.092E+00	7.646E+00	0.000E+00	0.806
CS-134	-2.148E-01	4.428E+00	6.189E+00	0.000E+00	-0.035
CS-136	4.897E-01	6.116E+00	1.009E+01	0.000E+00	0.049
CS-137	-1.586E+00	3.341E+00	5.359E+00	0.000E+00	-0.296
CE-139	-3.168E+00	3.313E+00	5.268E+00	0.000E+00	-0.601
BA-140	3.845E+00	2.178E+01	3.578E+01	0.000E+00	0.107
LA-140	-3.403E+00	7.230E+00	1.137E+01	0.000E+00	-0.299
CE-141	2.668E+00	7.977E+00	1.127E+01	0.000E+00	0.237
CE-144	-8.819E+00	2.922E+01	4.029E+01	0.000E+00	-0.219
EU-152	-1.111E+01	1.156E+01	1.512E+01	0.000E+00	-0.735
EU-154	3.543E-01	6.495E+00	1.072E+01	0.000E+00	0.033
AC-228	9.217E+00	1.453E+01	2.143E+01	0.000E+00	0.430
TH-232	9.175E+00	1.447E+01	2.133E+01	0.000E+00	0.430
U-235	1.363E+01	2.800E+01	3.983E+01	0.000E+00	0.342
U-238	7.995E+01	3.224E+02	5.468E+02	0.000E+00	0.146
AM-241	-3.773E+01	4.196E+01	6.652E+01	0.000E+00	-0.567

A,11L28821-7 ,06/08/2006 18:14,05/25/2006 17:00, 3.633E+00,WG L28821-7 DR
B,11L28821-7 ,LIBD ,06/07/2006 09:40,1135L090204

C,K-40	,YES,	5.922E+01,	5.272E+01,	5.044E+01,,	1.174
C,RA-226	,YES,	1.705E+01,	7.372E+01,	1.238E+02,,	0.138
C,TH-228	,YES,	6.084E-01,	8.625E+00,	9.289E+00,,	0.066
C,BE-7	,NO ,	1.727E+01,	3.171E+01,	5.321E+01,,	0.324
C,CR-51	,NO ,	-8.651E+00,	3.777E+01,	6.193E+01,,	-0.140
C,MN-54	,NO ,	3.116E+00,	2.971E+00,	5.244E+00,,	0.594
C,CO-57	,NO ,	2.087E-01,	3.181E+00,	5.254E+00,,	0.040
C,CO-58	,NO ,	-9.985E-01,	3.394E+00,	5.444E+00,,	-0.183
C,FE-59	,NO ,	-9.012E+00,	7.022E+00,	1.032E+01,,	-0.873
C,CO-60	,NO ,	1.188E+00,	3.392E+00,	5.244E+00,,	0.227
C,ZN-65	,NO ,	4.750E+00,	7.315E+00,	1.268E+01,,	0.375
C,SE-75	,NO ,	-5.862E+00,	4.397E+00,	6.961E+00,,	-0.842
C,SR-85	,NO ,	1.880E+01,	4.272E+00,	8.156E+00,,	2.305
C,Y-88	,NO ,	-2.580E-01,	3.823E+00,	6.247E+00,,	-0.041
C,NB-94	,NO ,	-1.640E+00,	3.116E+00,	4.975E+00,,	-0.330
C,NB-95	,NO ,	-1.842E+00,	3.546E+00,	5.621E+00,,	-0.328
C,ZR-95	,NO ,	-2.153E+00,	6.087E+00,	9.760E+00,,	-0.221
C,MO-99	,NO ,	-1.340E+02,	7.369E+02,	1.197E+03,,	-0.112
C,RU-103	,NO ,	3.732E+00,	4.011E+00,	6.858E+00,,	0.544
C,RU-106	,NO ,	2.906E+01,	3.109E+01,	5.177E+01,,	0.561
C,AG-110m	,NO ,	-1.240E+00,	3.059E+00,	4.928E+00,,	-0.252
C,SN-113	,NO ,	1.872E+00,	4.316E+00,	7.237E+00,,	0.259
C,SB-124	,NO ,	-2.281E+00,	4.565E+00,	6.149E+00,,	-0.371
C,SB-125	,NO ,	-2.123E+00,	8.975E+00,	1.453E+01,,	-0.146
C,TE-129M	,NO ,	-5.803E+00,	4.634E+01,	7.522E+01,,	-0.077
C,I-131	,NO ,	4.818E+00,	1.022E+01,	1.720E+01,,	0.280
C,BA-133	,NO ,	6.163E+00,	5.092E+00,	7.646E+00,,	0.806
C,CS-134	,NO ,	-2.148E-01,	4.428E+00,	6.189E+00,,	-0.035
C,CS-136	,NO ,	4.897E-01,	6.116E+00,	1.009E+01,,	0.049
C,CS-137	,NO ,	-1.586E+00,	3.341E+00,	5.359E+00,,	-0.296
C,CE-139	,NO ,	-3.168E+00,	3.313E+00,	5.268E+00,,	-0.601
C,BA-140	,NO ,	3.845E+00,	2.178E+01,	3.578E+01,,	0.107
C,LA-140	,NO ,	-3.403E+00,	7.230E+00,	1.137E+01,,	-0.299
C,CE-141	,NO ,	2.668E+00,	7.977E+00,	1.127E+01,,	0.237
C,CE-144	,NO ,	-8.819E+00,	2.922E+01,	4.029E+01,,	-0.219
C,EU-152	,NO ,	-1.111E+01,	1.156E+01,	1.512E+01,,	-0.735
C,EU-154	,NO ,	3.543E-01,	6.495E+00,	1.072E+01,,	0.033
C,AC-228	,NO ,	9.217E+00,	1.453E+01,	2.143E+01,,	0.430
C,TH-232	,NO ,	9.175E+00,	1.447E+01,	2.133E+01,,	0.430
C,U-235	,NO ,	1.363E+01,	2.800E+01,	3.983E+01,,	0.342
C,U-238	,NO ,	7.995E+01,	3.224E+02,	5.468E+02,,	0.146
C,AM-241	,NO ,	-3.773E+01,	4.196E+01,	6.652E+01,,	-0.567

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 9-JUN-2006 04:09:46.18
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 8-JUN-2006 14:48:43.23

LIMS No., Customer Name, Client ID: WG L28821-8 DRESDEN

Sample ID : 13L28821-8
Sample Type : WG
Quantity : 2.84980E+00 L
Start Channel : 25 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 10:55:00.
Geometry : 1335L090904
BKGFILE : 13BG060306MT
Real Time : 0 13:20:49.34
Live time : 0 13:20:35.61

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	46.40*	375	2224	2.52	92.93	1.43E-01	7.81E-03	29.8	2.30E+00
2	2	63.55*	156	1485	1.36	127.20	6.29E-01	3.25E-03	55.5	4.39E+00
3	2	66.27	375	1420	1.37	132.65	7.23E-01	7.81E-03	18.6	
4	3	77.17*	41	1023	0.96	154.42	1.09E+00	8.61E-04	151.2	2.39E+00
5	1	139.66*	272	1794	1.02	279.34	2.02E+00	5.66E-03	33.4	1.01E+00
6	1	185.71*	103	1364	1.13	371.37	1.95E+00	2.14E-03	83.1	6.63E-01
7	1	198.39*	345	1390	1.06	396.73	1.90E+00	7.18E-03	23.7	1.65E+00
8	1	238.43*	109	1627	1.25	476.77	1.73E+00	2.27E-03	87.3	2.30E+00
9	1	295.04*	35	956	1.14	589.96	1.52E+00	7.29E-04	196.5	1.06E+00
10	1	351.82*	168	770	1.58	703.48	1.34E+00	3.50E-03	40.4	2.81E+00
11	1	583.06*	50	335	1.99	1165.98	9.26E-01	1.03E-03	102.8	1.60E+00
12	1	595.83	197	341	1.59	1191.52	9.11E-01	4.11E-03	19.1	1.36E+00
13	1	609.04*	128	325	1.24	1217.96	8.97E-01	2.66E-03	38.4	1.74E+00
14	1	911.10*	9	340	1.82	1822.39	6.64E-01	1.95E-04	560.5	4.53E+00
15	1	969.22*	2	222	1.60	1938.73	6.34E-01	4.11E-05	*****	1.63E+00
16	1	1120.50*	7	154	1.68	2241.60	5.69E-01	1.44E-04	501.2	1.68E+00
17	1	1239.34*	15	207	1.08	2479.57	5.28E-01	3.22E-04	247.2	8.96E+00
18	1	1461.00*	96	172	1.81	2923.58	4.69E-01	1.99E-03	46.2	9.84E-01
19	1	1764.71*	11	97	2.21	3532.22	4.11E-01	2.20E-04	285.4	1.20E+00
20	1	1848.19	72	79	1.39	3699.58	3.99E-01	1.49E-03	29.4	9.70E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	96	10.67*	4.688E-01	3.780E+01	3.780E+01	92.37
RA-226	186.21	103	3.28*	1.946E+00	3.177E+01	3.177E+01	166.23
AC-228	835.50	------	1.75	7.084E-01	------	Line Not Found	------
	911.07	9	27.70*	6.640E-01	1.007E+00	1.011E+00	1120.92
TH-228	238.63	109	44.60*	1.734E+00	2.789E+00	2.815E+00	174.58
	240.98	------	3.95	1.723E+00	------	Line Not Found	------
TH-232	583.14	50	30.25	9.263E-01	3.488E+00	3.488E+00	205.65
	911.07	9	27.70*	6.640E-01	1.007E+00	1.007E+00	1120.92

163.35	------	4.70	2.011E+00	------	Line Not Found	------
185.71	103	54.00	1.946E+00	1.930E+00	1.930E+00	166.23
205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28821-8

Acquisition date : 8-JUN-2006 14:48:43

Total number of lines in spectrum	20	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	6	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.780E+01	3.780E+01	3.491E+01	92.37	
RA-226	1600.00Y	1.00	3.177E+01	3.177E+01	5.281E+01	166.23	
AC-228	5.75Y	1.00	1.007E+00	1.011E+00	11.33E+00	1120.92	
TH-228	1.91Y	1.01	2.789E+00	2.815E+00	4.914E+00	174.58	
TH-232	1.41E+10Y	1.00	1.007E+00	1.007E+00	11.29E+00	1120.92	
U-235	7.04E+08Y	1.00	1.930E+00	1.930E+00	3.208E+00	166.23	K
	Total Activity :		7.630E+01	7.633E+01			
	Grand Total Activity :		7.630E+01	7.633E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28821-8 Acquisition date : 8-JUN-2006 14:48:43

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	46.40	375	2224	2.52	92.93	87	15	7.81E-03	59.7	1.43E-01	
2	63.55	156	1485	1.36	127.20	121	16	3.25E-03	****	6.29E-01	
2	66.27	375	1420	1.37	132.65	121	16	7.81E-03	37.2	7.23E-01	
3	77.17	41	1023	0.96	154.42	141	17	8.61E-04	****	1.09E+00	
1	139.66	272	1794	1.02	279.34	275	10	5.66E-03	66.9	2.02E+00	
1	198.39	345	1390	1.06	396.73	393	10	7.18E-03	47.4	1.90E+00	
1	295.04	35	956	1.14	589.96	585	10	7.29E-04	****	1.52E+00	
1	351.82	168	770	1.58	703.48	698	11	3.50E-03	80.7	1.34E+00	
1	595.83	197	341	1.59	1191.52	1187	10	4.11E-03	38.1	9.11E-01	
1	609.04	128	325	1.24	1217.96	1214	9	2.66E-03	76.9	8.97E-01	
1	1120.50	7	154	1.68	2241.60	2237	10	1.44E-04	****	5.69E-01	
1	1239.34	15	207	1.08	2479.57	2471	18	3.22E-04	****	5.28E-01	
1	1764.71	11	97	2.21	3532.22	3525	16	2.20E-04	****	4.11E-01	
1	1848.19	72	79	1.39	3699.58	3690	16	1.49E-03	58.8	3.99E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	20	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	6	30.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.780E+01	3.780E+01	3.491E+01	92.37	
RA-226	1600.00Y	1.00	3.177E+01	3.177E+01	5.281E+01	166.23	
TH-228	1.91Y	1.01	2.789E+00	2.815E+00	4.914E+00	174.58	
TH-232	1.41E+10Y	1.00	2.440E+00	2.440E+00	5.617E+00	230.24	
	Total Activity :		7.479E+01	7.482E+01			

Grand Total Activity : 7.479E+01 7.482E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

K-40	3.780E+01	3.491E+01	2.973E+01	0.000E+00	1.271
RA-226	3.177E+01	5.281E+01	7.122E+01	0.000E+00	0.446
TH-228	2.815E+00	4.914E+00	5.408E+00	0.000E+00	0.521
TH-232	2.440E+00	5.617E+00	1.122E+01	0.000E+00	0.217

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-5.548E+00		1.761E+01	2.881E+01	0.000E+00	-0.193
NA-24	-4.009E-02		3.453E-02	Half-Life too short		
CR-51	-2.354E+01		1.934E+01	3.107E+01	0.000E+00	-0.758
MN-54	-1.873E-01		1.882E+00	3.115E+00	0.000E+00	-0.060
CO-57	-6.493E-01		1.843E+00	2.966E+00	0.000E+00	-0.219
CO-58	-2.785E+00		2.003E+00	3.117E+00	0.000E+00	-0.893
FE-59	4.234E+00		4.124E+00	7.071E+00	0.000E+00	0.599
CO-60	-2.412E-01		1.930E+00	3.141E+00	0.000E+00	-0.077
ZN-65	4.878E+00		4.961E+00	7.237E+00	0.000E+00	0.674
SE-75	2.740E-01		2.538E+00	4.221E+00	0.000E+00	0.065
SR-85	2.694E+01		2.438E+00	4.724E+00	0.000E+00	5.704
Y-88	1.252E+00		2.453E+00	3.519E+00	0.000E+00	0.356
NB-94	7.539E-01		1.848E+00	3.073E+00	0.000E+00	0.245
NB-95	-1.858E-02		2.043E+00	3.340E+00	0.000E+00	-0.006
ZR-95	-8.566E-01		3.719E+00	6.045E+00	0.000E+00	-0.142
MO-99	8.094E+01		1.494E+02	2.486E+02	0.000E+00	0.326
RU-103	6.165E-01		2.205E+00	3.646E+00	0.000E+00	0.169
RU-106	-2.846E+00		1.785E+01	2.913E+01	0.000E+00	-0.098
AG-110m	-8.053E-02		1.877E+00	3.098E+00	0.000E+00	-0.026
SN-113	8.111E-01		2.531E+00	4.138E+00	0.000E+00	0.196
SB-124	-1.894E+00		5.130E+00	3.376E+00	0.000E+00	-0.561
SB-125	-4.028E+00		5.213E+00	8.500E+00	0.000E+00	-0.474
TE-129M	1.471E+01		2.492E+01	4.169E+01	0.000E+00	0.353
I-131	1.743E+00		4.225E+00	6.949E+00	0.000E+00	0.251
BA-133	6.060E+00		3.122E+00	4.539E+00	0.000E+00	1.335
CS-134	3.805E+00		4.082E+00	3.584E+00	0.000E+00	1.062
CS-136	1.091E-01		2.921E+00	4.758E+00	0.000E+00	0.023
CS-137	1.969E+00		2.325E+00	3.511E+00	0.000E+00	0.561
CE-139	1.739E+00		1.862E+00	3.111E+00	0.000E+00	0.559
BA-140	-4.305E-01		1.085E+01	1.772E+01	0.000E+00	-0.024
LA-140	2.895E+00		3.466E+00	5.904E+00	0.000E+00	0.490
CE-141	5.288E+00		4.248E+00	6.148E+00	0.000E+00	0.860
CE-144	-2.559E+00		1.613E+01	2.282E+01	0.000E+00	-0.112
EU-152	-1.464E+01		7.222E+00	9.396E+00	0.000E+00	-1.558
EU-154	7.743E-02		3.798E+00	6.144E+00	0.000E+00	0.013
AC-228	1.011E+00		1.133E+01	1.203E+01	0.000E+00	0.084
U-235	2.219E+01		1.774E+01	2.385E+01	0.000E+00	0.930
U-238	1.682E+02		2.456E+02	3.573E+02	0.000E+00	0.471
AM-241	2.344E+01		1.810E+01	2.642E+01	0.000E+00	0.887

A,13L28821-8 ,06/09/2006 04:09,05/30/2006 10:55, 2.850E+00,WG L28821-8 DR
B,13L28821-8 ,LIBD ,06/07/2006 09:34,1335L090904

C,K-40	,YES,	3.780E+01,	3.491E+01,	2.973E+01,,	1.271
C,RA-226	,YES,	3.177E+01,	5.281E+01,	7.122E+01,,	0.446
C,TH-228	,YES,	2.815E+00,	4.914E+00,	5.408E+00,,	0.521
C,TH-232	,YES,	2.440E+00,	5.617E+00,	1.122E+01,,	0.217
C,BE-7	,NO ,	-5.548E+00,	1.761E+01,	2.881E+01,,	-0.193
C,CR-51	,NO ,	-2.354E+01,	1.934E+01,	3.107E+01,,	-0.758
C,MN-54	,NO ,	-1.873E-01,	1.882E+00,	3.115E+00,,	-0.060
C,CO-57	,NO ,	-6.493E-01,	1.843E+00,	2.966E+00,,	-0.219
C,CO-58	,NO ,	-2.785E+00,	2.003E+00,	3.117E+00,,	-0.893
C,FE-59	,NO ,	4.234E+00,	4.124E+00,	7.071E+00,,	0.599
C,CO-60	,NO ,	-2.412E-01,	1.930E+00,	3.141E+00,,	-0.077
C,ZN-65	,NO ,	4.878E+00,	4.961E+00,	7.237E+00,,	0.674
C,SE-75	,NO ,	2.740E-01,	2.538E+00,	4.221E+00,,	0.065
C,SR-85	,NO ,	2.694E+01,	2.438E+00,	4.724E+00,,	5.704
C,Y-88	,NO ,	1.252E+00,	2.453E+00,	3.519E+00,,	0.356
C,NB-94	,NO ,	7.539E-01,	1.848E+00,	3.073E+00,,	0.245
C,NB-95	,NO ,	-1.858E-02,	2.043E+00,	3.340E+00,,	-0.006
C,ZR-95	,NO ,	-8.566E-01,	3.719E+00,	6.045E+00,,	-0.142
C,MO-99	,NO ,	8.094E+01,	1.494E+02,	2.486E+02,,	0.326
C,RU-103	,NO ,	6.165E-01,	2.205E+00,	3.646E+00,,	0.169
C,RU-106	,NO ,	-2.846E+00,	1.785E+01,	2.913E+01,,	-0.098
C,AG-110m	,NO ,	-8.053E-02,	1.877E+00,	3.098E+00,,	-0.026
C,SN-113	,NO ,	8.111E-01,	2.531E+00,	4.138E+00,,	0.196
C,SB-124	,NO ,	-1.894E+00,	5.130E+00,	3.376E+00,,	-0.561
C,SB-125	,NO ,	-4.028E+00,	5.213E+00,	8.500E+00,,	-0.474
C,TE-129M	,NO ,	1.471E+01,	2.492E+01,	4.169E+01,,	0.353
C,I-131	,NO ,	1.743E+00,	4.225E+00,	6.949E+00,,	0.251
C,BA-133	,NO ,	6.060E+00,	3.122E+00,	4.539E+00,,	1.335
C,CS-134	,NO ,	3.805E+00,	4.082E+00,	3.584E+00,,	1.062
C,CS-136	,NO ,	1.091E-01,	2.921E+00,	4.758E+00,,	0.023
C,CS-137	,NO ,	1.969E+00,	2.325E+00,	3.511E+00,,	0.561
C,CE-139	,NO ,	1.739E+00,	1.862E+00,	3.111E+00,,	0.559
C,BA-140	,NO ,	-4.305E-01,	1.085E+01,	1.772E+01,,	-0.024
C,LA-140	,NO ,	2.895E+00,	3.466E+00,	5.904E+00,,	0.490
C,CE-141	,NO ,	5.288E+00,	4.248E+00,	6.148E+00,,	0.860
C,CE-144	,NO ,	-2.559E+00,	1.613E+01,	2.282E+01,,	-0.112
C,EU-152	,NO ,	-1.464E+01,	7.222E+00,	9.396E+00,,	-1.558
C,EU-154	,NO ,	7.743E-02,	3.798E+00,	6.144E+00,,	0.013
C,AC-228	,NO ,	1.011E+00,	1.133E+01,	1.203E+01,,	0.084
C,U-235	,NO ,	2.219E+01,	1.774E+01,	2.385E+01,,	0.930
C,U-238	,NO ,	1.682E+02,	2.456E+02,	3.573E+02,,	0.471
C,AM-241	,NO ,	2.344E+01,	1.810E+01,	2.642E+01,,	0.887

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company

2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28990

Exelon

June 23, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28990

EX001-3ESPDRES-06

06/23/2006 08:13

Sample Receipt

The following samples were received on June 19, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-DSP-147-053006-JH-016	L28990-1	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28990
EX001-3ESPDRES-06

06/23/2006 08:13

H-3

Quality Control

Quality control samples were analyzed as WG4160.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-DSP-147-053006-JH-016	L28990-1	WG4160-3

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4170.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
RB-TMI-RB7-061206-MMM-062	L28973-1	WG4170-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28990
EX001-3ESPDRES-06

06/23/2006 08:13

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

06/19/06 11:22

SR #: SR08963

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Client: Exelon

Project #: EX001-3ESPDRES-06

LIMS #: L28990

Initiated By: RCHARLES
Init Date: 06/19/06 Receive Date: 06/19/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	NA	PH<2
9	Other (Describe)	NA	

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Exelon- Dresden

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** john hoffmann

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Sr-89/90	Gamma Spec	REMARKS
1	5/30/06	0940	WG-DN-DSP-147-053006-JH-016	WATER	2	X	X	X	
~~2~~	~~5/30/06~~	~~1350~~	~~WG-DN-DSP-148-053006-JH-017~~	~~WATER~~	~~2~~	~~X~~	~~X~~	~~X~~	Disregard
~~3~~	~~5/30/06~~	~~1550~~	~~WG-DN-DSP-156-053006-JH-018~~	~~WATER~~	~~2~~	~~X~~	~~X~~	~~X~~	Disregard
			TOTAL NUMBER OF CONTAINERS		6	2			

RELINQUISHED BY: ① [signature]	DATE: 5/30/06 TIME: 18:30	RECEIVED BY: ② [signature]	DATE: 5-30-06 TIME: 1833
RELINQUISHED BY: ② [signature]	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, Kendall Rannaja

RECEIVED FOR LABORATORY BY: Pat Marshall 13741
DATE: 6/19/06 TIME: 0900

1001-00(SOURCE)GN-CO004

6/19/06

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

June 19, 2006

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on June 19, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by June 21, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-DSP-147-053006-JH-016	**L28990-1**		**05/30/06:0940**	
WG	GELI	162.00		
WG	H-3	162.00		
WG	SR-90 (FAST)	140.00		

End of document

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28990-1 Containernum 1

Prod	Analyst
H-3	EJ
SR-90 (FAST)	CJF
GELI	DW

Relinquish Date	Relinquish By		Received By	
06/19/2006 00:00			099999	Sample Custodian
06/20/2006 09:33	099999	Sample Custodian	029964	Erin Jenkins
06/20/2006 09:35	029964	Erin Jenkins	099999	Sample Custodian

****

Sample # L28990-1 Containernum 2

Prod	Analyst
H-3	EJ
SR-90 (FAST)	CJF
GELI	DW

Relinquish Date	Relinquish By		Received By	
06/19/2006 00:00			099999	Sample Custodian
06/20/2006 09:33	099999	Sample Custodian	029964	Erin Jenkins
06/20/2006 10:13	029964	Erin Jenkins	099999	Sample Custodian

06/23/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28990

****

L28990-1 **WG** **WG-DN-DSP-147-053006-JH-016**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/19/06
Aliquot	GELI	DW	06/19/06
Aliquot	H-3	EJ	06/20/06
Aliquot	SR-90 (FAST)	CJF	06/21/06
Count Room	GELI	ILL	06/19/06
Count Room	H-3	KOJ	06/20/06
Count Room	SR-90 (FAST)	KOJ	06/22/06

Analytical Results Summary

Report of Analysis

06/23/06 08:20

L28990

Conestoga-Rovers & Associates

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-DSP-147-053006-JH-016** Collect Start: 05/30/2006 09:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/19/2006 % Moisture:
LIMS Number: L28990-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-4.38E+00	9.46E+01	**1.56E+02**	pCi/L		10	ml		06/20/06	60	M	U		
TOTAL SR	2018	8.95E-01	7.39E-01	**1.36E+00**	pCi/L		450	ml	05/30/06 09:40	06/22/06	120	M	U		
MN-54	2007	-2.91E-01	2.92E+00	**4.71E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
CO-58	2007	6.29E-01	3.24E+00	**5.35E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
FE-59	2007	4.42E+00	7.28E+00	**1.24E+01**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
CO-60	2007	2.76E+00	3.52E+00	**5.97E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
ZN-65	2007	3.89E+00	7.70E+00	**1.13E+01**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
NB-95	2007	1.97E+00	3.25E+00	**5.53E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
ZR-95	2007	-3.75E-01	5.58E+00	**9.10E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
CS-134	2007	5.29E+00	5.91E+00	**5.08E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
CS-137	2007	3.38E+00	3.08E+00	**5.40E+00**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
BA-140	2007	4.93E+00	2.77E+01	**4.59E+01**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No
LA-140	2007	-5.85E+00	9.32E+00	**1.43E+01**	pCi/L		3058.46	ml	05/30/06 09:40	06/19/06	14400	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28990

6/23/2006 8:18:01AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4160-1	H-3	WO	06/20/2006 19:15	< 1.570E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4160-2	H-3	WO	06/20/2006 20:19	5.05E+002	4.960E+02	pCi/Total	98.3	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4160-3	H-3	WG	06/22/2006 11:13	< 1.560E+02	< 1.880E+02	pCi/L		<30	**	NE
L28990-1										

L28990 **H-3**

Associated Samples for **WG4160**

SAMPLENUM	CLIENTID
L28990-1	WG-DN-DSP-147-053006-JH-016

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28990

6/23/2006 8:18:01AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4170-1	TOTAL SR	WO	06/22/2006 16:17	< 6.870E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4170-2	TOTAL SR	WO	06/22/2006 16:17	5.84E+001	6.510E+01	pCi/Total	111.5	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4170-3 L28973-1	TOTAL SR	WG	06/22/2006 16:17	< 1.570E+00	< 1.030E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 23 2006, 08:34 am

Work Order: *L28990* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28990-1		H-3					0		20-jun-06 20:37	LS7	83	60	1.41	60	.207		EJ
WG-DN-DSP-147-053006-J				10 ml													

Activity: -4.38E+00 Error: 9.46E+01 MDC: 1.56E+02 *

Raw Data Sheet (rawdata)
Jun 23 2006, 08:34 am

Work Order: *L28990* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28990-1		TOTAL SR	30-may-06		22-jun-06		0		22-jun-06	X4D	133	120	340	400	.353	.998	CJF
WG-DN-DSP-147-053006-J			09:40	450 ml	11:45			81.99	16:17								
Activity: 8.95E-01 Error: 7.39E-01 MDC: 1.36E+00 *																	

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 19-JUN-2006 17:33:09.01
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 19-JUN-2006 13:32:59.12

LIMS No., Customer Name, Client ID: WG L28990-1 EXELON/DRESDEN

Sample ID	: 04L28990-1		Smple Date: 30-MAY-2006 09:40:00.
Sample Type	: WG		Geometry : 043L082004
Quantity	: 3.05850E+00 L		BKGFILE : 04BG060306MT
Start Channel	: 90	Energy Tol : 1.00000	Real Time : 0 04:00:02.39
End Channel	: 4090	Pk Srch Sens: 5.00000	Live time : 0 04:00:00.00
MDA Constant	: 0.00	Library Used: LIBD	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.20*	115	350	0.80	133.07	6.59E-01	8.00E-03	29.5	6.86E+00
2	1	140.14	60	383	1.30	280.86	2.04E+00	4.16E-03	60.4	3.46E+00
3	1	198.49*	49	248	1.05	397.51	1.86E+00	3.42E-03	64.8	5.48E-01
4	1	238.84*	27	221	1.36	478.18	1.68E+00	1.86E-03	110.5	3.04E+00
5	1	295.39	74	102	1.32	591.22	1.45E+00	5.11E-03	25.9	6.71E-01
6	1	352.62*	31	172	1.59	705.64	1.28E+00	2.13E-03	99.4	2.42E+00
7	1	583.45*	26	56	2.03	1167.12	8.77E-01	1.81E-03	67.5	1.54E+00
8	1	596.11	68	98	2.05	1192.44	8.63E-01	4.75E-03	32.3	7.49E-01
9	1	609.50*	61	116	1.88	1219.20	8.48E-01	4.24E-03	44.0	1.03E+00
10	1	1120.30*	25	33	1.57	2240.55	5.27E-01	1.72E-03	65.6	1.12E+00
11	1	1293.74	98	83	25.77	2587.36	4.71E-01	6.81E-03	27.5	2.57E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	27	44.60*	1.679E+00	2.193E+00	2.237E+00	220.96
	240.98	------	3.95	1.669E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28990-1 Acquisition date : 19-JUN-2006 13:32:59

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.02	2.193E+00	2.237E+00	4.943E+00	220.96	
Total Activity :			2.193E+00	2.237E+00			
Grand Total Activity :			2.193E+00	2.237E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28990-1 Acquisition date : 19-JUN-2006 13:32:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.20	115	350	0.80	133.07	129	7	8.00E-03	59.1	6.59E-01	
1	140.14	60	383	1.30	280.86	276	9	4.16E-03	****	2.04E+00	
1	198.49	49	248	1.05	397.51	394	8	3.42E-03	****	1.86E+00	
1	295.39	74	102	1.32	591.22	588	7	5.11E-03	51.8	1.45E+00	
1	352.62	31	172	1.59	705.64	698	13	2.13E-03	****	1.28E+00	
1	583.45	26	56	2.03	1167.12	1163	10	1.81E-03	****	8.77E-01	T
1	596.11	68	98	2.05	1192.44	1186	13	4.75E-03	64.5	8.63E-01	
1	609.50	61	116	1.88	1219.20	1212	14	4.24E-03	88.1	8.48E-01	
1	1120.30	25	33	1.57	2240.55	2230	19	1.72E-03	****	5.27E-01	
1	1293.74	98	83	25.77	2587.36	2581	30	6.81E-03	54.9	4.71E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.02	2.193E+00	2.237E+00	4.943E+00	220.96	
	Total Activity :		2.193E+00	2.237E+00			
Grand Total Activity :			2.193E+00	2.237E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	2.237E+00	4.943E+00	7.910E+00	0.000E+00	0.283

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.320E+01		2.743E+01	4.652E+01	0.000E+00	0.284

NA-24	-4.575E+03	7.785E+03	Half-Life too short		
K-40	1.018E+01	3.923E+01	7.160E+01	0.000E+00	0.142
CR-51	-1.839E+01	3.696E+01	5.985E+01	0.000E+00	-0.307
MN-54	-2.912E-01	2.916E+00	4.706E+00	0.000E+00	-0.062
CO-57	1.320E+00	2.491E+00	4.130E+00	0.000E+00	0.320
CO-58	6.292E-01	3.240E+00	5.351E+00	0.000E+00	0.118
FE-59	4.423E+00	7.283E+00	1.240E+01	0.000E+00	0.357
CO-60	2.762E+00	3.519E+00	5.972E+00	0.000E+00	0.463
ZN-65	3.890E+00	7.697E+00	1.133E+01	0.000E+00	0.343
SE-75	-3.216E+00	3.878E+00	6.063E+00	0.000E+00	-0.530
SR-85	2.043E+01	3.933E+00	7.708E+00	0.000E+00	2.650
Y-88	-1.863E+00	3.517E+00	5.461E+00	0.000E+00	-0.341
NB-94	1.048E+00	2.732E+00	4.602E+00	0.000E+00	0.228
NB-95	1.974E+00	3.246E+00	5.528E+00	0.000E+00	0.357
ZR-95	-3.750E-01	5.579E+00	9.098E+00	0.000E+00	-0.041
MO-99	1.951E+03	3.194E+03	5.456E+03	0.000E+00	0.358
RU-103	2.285E+00	3.920E+00	6.652E+00	0.000E+00	0.344
RU-106	3.479E+00	2.786E+01	4.549E+01	0.000E+00	0.076
AG-110m	8.325E-01	2.921E+00	4.918E+00	0.000E+00	0.169
SN-113	1.529E+00	3.994E+00	6.624E+00	0.000E+00	0.231
SB-124	1.957E+00	7.157E+00	5.486E+00	0.000E+00	0.357
SB-125	1.043E+00	7.397E+00	1.242E+01	0.000E+00	0.084
TE-129M	-1.953E+00	4.456E+01	7.375E+01	0.000E+00	-0.026
I-131	5.465E-01	1.558E+01	2.556E+01	0.000E+00	0.021
BA-133	4.972E+00	4.390E+00	6.548E+00	0.000E+00	0.759
CS-134	5.288E+00	5.907E+00	5.082E+00	0.000E+00	1.040
CS-136	-3.130E+00	7.724E+00	1.221E+01	0.000E+00	-0.256
CS-137	3.381E+00	3.075E+00	5.404E+00	0.000E+00	0.626
CE-139	-4.640E-01	2.680E+00	4.442E+00	0.000E+00	-0.104
BA-140	4.934E+00	2.771E+01	4.589E+01	0.000E+00	0.107
LA-140	-5.849E+00	9.322E+00	1.427E+01	0.000E+00	-0.410
CE-141	-3.208E+00	7.506E+00	1.015E+01	0.000E+00	-0.316
CE-144	-5.628E+00	2.279E+01	3.127E+01	0.000E+00	-0.180
EU-152	-4.010E+00	1.007E+01	1.369E+01	0.000E+00	-0.293
EU-154	2.696E+00	5.054E+00	8.376E+00	0.000E+00	0.322
RA-226	-2.093E+01	6.569E+01	1.043E+02	0.000E+00	-0.201
AC-228	-3.961E+00	1.089E+01	1.722E+01	0.000E+00	-0.230
TH-232	-3.934E+00	1.082E+01	1.711E+01	0.000E+00	-0.230
U-235	-2.722E+00	2.213E+01	3.038E+01	0.000E+00	-0.090
U-238	1.676E+01	3.295E+02	5.422E+02	0.000E+00	0.031
AM-241	-4.599E+01	2.700E+01	3.805E+01	0.000E+00	-1.209

```
A,04L28990-1       ,06/19/2006 17:33,05/30/2006 09:40,   3.059E+00,WG L28990-1 EX
B,04L28990-1       ,LIBD                ,06/13/2006 09:42,043L082004
C,TH-228   ,YES,    2.237E+00,    4.943E+00,    7.910E+00,,     0.283
C,BE-7     ,NO ,    1.320E+01,    2.743E+01,    4.652E+01,,     0.284
C,K-40     ,NO ,    1.018E+01,    3.923E+01,    7.160E+01,,     0.142
C,CR-51    ,NO ,   -1.839E+01,    3.696E+01,    5.985E+01,,    -0.307
C,MN-54    ,NO ,   -2.912E-01,    2.916E+00,    4.706E+00,,    -0.062
C,CO-57    ,NO ,    1.320E+00,    2.491E+00,    4.130E+00,,     0.320
C,CO-58    ,NO ,    6.292E-01,    3.240E+00,    5.351E+00,,     0.118
C,FE-59    ,NO ,    4.423E+00,    7.283E+00,    1.240E+01,,     0.357
C,CO-60    ,NO ,    2.762E+00,    3.519E+00,    5.972E+00,,     0.463
C,ZN-65    ,NO ,    3.890E+00,    7.697E+00,    1.133E+01,,     0.343
C,SE-75    ,NO ,   -3.216E+00,    3.878E+00,    6.063E+00,,    -0.530
C,SR-85    ,NO ,    2.043E+01,    3.933E+00,    7.708E+00,,     2.650
C,Y-88     ,NO ,   -1.863E+00,    3.517E+00,    5.461E+00,,    -0.341
C,NB-94    ,NO ,    1.048E+00,    2.732E+00,    4.602E+00,,     0.228
C,NB-95    ,NO ,    1.974E+00,    3.246E+00,    5.528E+00,,     0.357
C,ZR-95    ,NO ,   -3.750E-01,    5.579E+00,    9.098E+00,,    -0.041
C,MO-99    ,NO ,    1.951E+03,    3.194E+03,    5.456E+03,,     0.358
C,RU-103   ,NO ,    2.285E+00,    3.920E+00,    6.652E+00,,     0.344
C,RU-106   ,NO ,    3.479E+00,    2.786E+01,    4.549E+01,,     0.076
C,AG-110m  ,NO ,    8.325E-01,    2.921E+00,    4.918E+00,,     0.169
C,SN-113   ,NO ,    1.529E+00,    3.994E+00,    6.624E+00,,     0.231
C,SB-124   ,NO ,    1.957E+00,    7.157E+00,    5.486E+00,,     0.357
C,SB-125   ,NO ,    1.043E+00,    7.397E+00,    1.242E+01,,     0.084
C,TE-129M  ,NO ,   -1.953E+00,    4.456E+01,    7.375E+01,,    -0.026
C,I-131    ,NO ,    5.465E-01,    1.558E+01,    2.556E+01,,     0.021
C,BA-133   ,NO ,    4.972E+00,    4.390E+00,    6.548E+00,,     0.759
C,CS-134   ,NO ,    5.288E+00,    5.907E+00,    5.082E+00,,     1.040
C,CS-136   ,NO ,   -3.130E+00,    7.724E+00,    1.221E+01,,    -0.256
C,CS-137   ,NO ,    3.381E+00,    3.075E+00,    5.404E+00,,     0.626
C,CE-139   ,NO ,   -4.640E-01,    2.680E+00,    4.442E+00,,    -0.104
C,BA-140   ,NO ,    4.934E+00,    2.771E+01,    4.589E+01,,     0.107
C,LA-140   ,NO ,   -5.849E+00,    9.322E+00,    1.427E+01,,    -0.410
C,CE-141   ,NO ,   -3.208E+00,    7.506E+00,    1.015E+01,,    -0.316
C,CE-144   ,NO ,   -5.628E+00,    2.279E+01,    3.127E+01,,    -0.180
C,EU-152   ,NO ,   -4.010E+00,    1.007E+01,    1.369E+01,,    -0.293
C,EU-154   ,NO ,    2.696E+00,    5.054E+00,    8.376E+00,,     0.322
C,RA-226   ,NO ,   -2.093E+01,    6.569E+01,    1.043E+02,,    -0.201
C,AC-228   ,NO ,   -3.961E+00,    1.089E+01,    1.722E+01,,    -0.230
C,TH-232   ,NO ,   -3.934E+00,    1.082E+01,    1.711E+01,,    -0.230
C,U-235    ,NO ,   -2.722E+00,    2.213E+01,    3.038E+01,,    -0.090
C,U-238    ,NO ,    1.676E+01,    3.295E+02,    5.422E+02,,     0.031
C,AM-241   ,NO ,   -4.599E+01,    2.700E+01,    3.805E+01,,    -1.209
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company

2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28845 R3

Exelon

July 19, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28845
EX001-3ESPDRES-06

07/19/2006 16:41

Sample Receipt

The following samples were received on June 5, 2006 in good condition, unless otherwise noted.

Sample WG-DN-MW-DN-108I-052606-JL-065 (L28845-7) exceeded 2.0 pCi/L for total strontium and has been scheduled for Sr-90 analysis.

Revision #1:
Analysis for Sr-90 confirmed the original results for total strontium. The activity detected on the original analysis can be attributed to the Sr-90 nuclide. The Strontium 90 result is included in this report.

Revision #2:
Sample WG-DN-MW-DN-108I-052606-JL-065 (L28845-7) analysis for Sr-90 confirmed the original results for total strontium. The activity detected on the original analysis can be attributed to the Sr-90 nuclide. The Strontium 90 result is included in this report.

Revision #3:
Report has been revised to include the Sr-90 re-analysis results of sample WG-DN-MW-DN-108I-052606-JL-065 (L28845-7).

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-103S-052606-JH-010	L28845-1	
WG-DN-MW-DN-103S-052606-JH-011	L28845-2	
WG-DN-MW-DN-103I-052606-JH-012	L28845-3	
WG-DN-MW-DN-106S-052606-JH-013	L28845-4	
WG-DN-MW-DN-101S-052606-JL-063	L28845-5	
WG-DN-MW-DN-101I-052606-JL-064	L28845-6	
WG-DN-MW-DN-108I-052606-JL-065	L28845-7	
WG-DN-DSP-DN-123-052606-JL-060	L28845-8	
WG-DN-DSP-DN-123-052606-JL-061	L28845-9	
WG-DN-DSP-DN-124-052606-JL-062	L28845-10	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
SR-90	TBE-2019	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28845

EX001-3ESPDRES-06

07/19/2006 16:41

Radiological Parameter	TBE Knoxville Method	Reference Method
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28845
EX001-3ESPDRES-06

07/19/2006 16:41

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4117,WG4118.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-TMI-MS-19-053106-JAS-017	L28841-1	WG4117-1
WG-TMI-MS-7-053106-JAS-015	L28846-1	WG4118-1

H-3

Quality Control

Quality control samples were analyzed as WG4110.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-TMI-MS-7-053106-JAS-015	L28846-1	WG4110-3

SR-90

Per client request to confirm original result.

Quality Control

Quality control samples were analyzed as WG4162,WG4230.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28845
EX001-3ESPDRES-06

07/19/2006 16:41

TOTAL SR

Client requested reanalysis for confirmation

Quality Control

Quality control samples were analyzed as WG4162.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
STILL CREEK	L28864-1	WG4162-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

Sample Receipt Verification/Variance Report

SR #: SR08727

Client: Exelon Project #: EX001-3ESPDRES-06 LIMS #: L28845

Initiated By: BWILKERSON
Init Date: 06/06/06 Receive Date: 06/05/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes	No	NA	Comment
1	Shipping container custody seals present and intact.			NA	
2	Sample container custody seals present and intact.			NA	
3	Sample containers received in good condition	Y			
4	Chain of custody received with samples	Y			
5	All samples listed on chain of custody received	Y			
6	Sample container labels present and legible.	Y			
7	Information on container labels correspond with chain of custody	Y			
8	Sample(s) properly preserved and in appropriate container(s)	Y			pH at or below 2 on Gamma portion
9	Other (Describe)			NA	

L20045

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Exelon - Dresden

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hoffmann PRINTED NAME: john hoffmann

PARAMETERS

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	tritium	Sr-80/90	Gamma Spec								REMARKS
1	5/26/06	0940	~~WG-DN-103S~~ WG-DN-MW-DN-103S-052606-JH-010	WATER	2	X	X	X								
2		1000	WG-DN-MW-DN-103S-052606-JH-011													
3		1105	WG-DN-MW-DN-103I-052606-JH-012													
4		1400	WG-DN-MW-DN-106S-052606-JH-013													
~~5~~		~~1520~~	~~WG-DSP-121~~ ~~WG-DN-DSP-121-052606-JH-014~~													Diregard
~~6~~		~~1655~~	~~WG-DN-DSP-117-052606-JH-015~~													Disregard
			TOTAL NUMBER OF CONTAINERS		~~12~~	8										

RELINQUISHED BY: ① [signature]	DATE: 5/26/06 TIME: 1820	RECEIVED BY: ② [signature]	DATE: 5/26/06 TIME: 1823
RELINQUISHED BY: ② [signature]	DATE: 6/2/06 TIME: 1115	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT:

AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: john hoffmann, tim leo

RECEIVED FOR LABORATORY BY: B Wilkerson
DATE: 6-06-06 TIME: 11:00

13744

5 BW 6-6-06

1001-00(SOURCE)GN-CO004

L28845 R3 / 8 of 90

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 451136-23

PROJECT NAME: Dresden Generating Station

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Luzwick **PRINTED NAME:** Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	Strontium 89/90	Gamma Spec	REMARKS
	5/26/06	1010	~~WG-DN-DSP-DN-123-052606-JL-0060~~	~~W~~	~~2~~	~~X~~	~~X~~	~~X~~	~~disregard~~
		1520	~~WG-DN-DSP-DN-123-052606-JL-D61~~	~~W~~	~~2~~	~~X~~	~~X~~	~~X~~	~~disregard~~
		1700	~~WG-DN-DSP-DN-124-052606-JL-D62~~	~~W~~	~~2~~	~~X~~	~~X~~	~~X~~	~~disregard~~
	5/26/06	1410	WG-DN-MW-DN-101S-052606-JL-0063	W	2	X	X	X	
		1535	WG-DN-MW-DN-101I-052606-JL-D64	W	2	X	X	X	
	↓	1700	WG-DN-MW-DN-108I-052606-JL-D65	W	2	X	X	X	

TOTAL NUMBER OF CONTAINERS ~~18~~ 6

RELINQUISHED BY: ① Julie Luzwick	DATE: 5/26/06 TIME: 1820	RECEIVED BY: ② Fred Faubion	DATE: 5/26/06 TIME: 1822
RELINQUISHED BY: ②	DATE: 6/2/06 TIME: 1115	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Julie L. Kendall R.

RECEIVED FOR LABORATORY BY: Bill Thereson 12765
DATE: 6-5-06 TIME: 11:00

1001-00(SOURCE)GN-CO004

CAUTION - HIGH [illegible]

CONESTOGA-ROVERS & ASSOCIATES

8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown

REFERENCE NUMBER: 45136-23

PROJECT NAME: Dresden Generating Station

SAMPLER'S SIGNATURE: Julie Luzwick   PRINTED NAME: Julie Luzwick

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	Tritium	Strontium 89/90	Gamma spec						REMARKS
	5/26/06	1010	WG-DN-DSP-DN-123-052606-JL-060	W	2	X	X	X						
		1020	WG-DN-DSP-DN-123-052606-JL-061	W	2	X	X	X						
		1200	WG-DN-DSP-DN-124-052606-JL-062	W	2	X	X	X						

TOTAL NUMBER OF CONTAINERS: 6

RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME
① Julie Luzwick	DATE: 5/26/06 TIME: 1820	② [illegible signature]	DATE: 6/1/06 TIME: 1300
②	DATE: TIME:	③	DATE: TIME:
③	DATE: TIME:	④	DATE: TIME:

METHOD OF SHIPMENT:

AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: B. [illegible]   12776

DATE: 6-5-06 TIME: 11:00

1001-00(SOURCE)GN-CO004

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28845-1 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-1 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28845-2 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-2 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****

Sample # L28845-3 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO

****
Sample # L28845-3 Containernum 1

SR-90 (FAST) LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28845-3 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****
Sample # L28845-4 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****
Sample # L28845-4 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****
Sample # L28845-5 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	

Internal Chain of Custody

****

Sample # L28845-5 Containernum 1

Relinquish Date			Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-5 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****

Sample # L28845-6 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-6 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****

Sample # L28845-7 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB
SR-90	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian

Internal Chain of Custody

****

Sample # L28845-7 Containernum 1

Relinquish Date			Received By	
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-7 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB
SR-90	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb

****

Sample # L28845-8 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-8 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28845-9 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

Internal Chain of Custody

****

Sample # L28845-9 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28845-10 Containernum 1

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/08/2006 14:02	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28845-10 Containernum 2

Prod	Analyst
GELI	DW
H-3	SO
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
06/06/2006 00:00			099999	Sample Custodian
06/09/2006 15:38	099999	Sample Custodian	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	029728	Lauren Larsen
06/09/2006 15:39	029728	Lauren Larsen	030854	Donna Webb
06/09/2006 15:39	030854	Donna Webb	099999	Sample Custodian

07/19/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28845

****

L28845-1 WG WG-DN-MW-DN-103S-052606-JH-010

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/05/06
Aliquot	GELI	DW	06/09/06
Aliquot	H-3	SO	06/09/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	KOJ	06/11/06
Count Room	H-3	KPW	06/11/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28845-2 WG WG-DN-MW-DN-103S-052606-JH-011

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/05/06
Aliquot	GELI	DW	06/09/06
Aliquot	H-3	SO	06/09/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	ILL	06/12/06
Count Room	H-3	KPW	06/11/06
Count Room	SR-90 (FAST)	KOJ	06/21/06

****

L28845-3 WG WG-DN-MW-DN-103I-052606-JH-012

Process step	Prod	Analyst	Date
Login		RCHARLES	06/05/06
Aliquot	GELI	DW	06/09/06
Aliquot	H-3	SO	06/09/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	ILL	06/12/06
Count Room	H-3	KPW	06/11/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28845-4 WG WG-DN-MW-DN-106S-052606-JH-013

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/05/06
Aliquot	GELI	DW	06/09/06
Aliquot	H-3	SO	06/09/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	ILL	06/12/06
Count Room	H-3	KPW	06/11/06
Count Room	SR-90 (FAST)	KOJ	06/20/06

****

L28845-5 WG WG-DN-MW-DN-101S-052606-JL-063

Process step	Prod	Analyst	Date
Login		BWILKERSON	06/05/06
Aliquot	GELI	DW	06/09/06
Aliquot	H-3	SO	06/09/06
Aliquot	SR-90 (FAST)	LCB	06/14/06
Count Room	GELI	ILL	06/12/06

07/19/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28845

L28845-5	**WG**	**WG-DN-MW-DN-101S-052606-JL-063**		
Count Room	H-3		KPW	06/11/06
Count Room	SR-90	(FAST)	KOJ	06/20/06

****

L28845-6	**WG**	**WG-DN-MW-DN-101I-052606-JL-064**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/05/06
Aliquot	GELI		DW	06/09/06
Aliquot	H-3		SO	06/09/06
Aliquot	SR-90	(FAST)	LCB	06/14/06
Count Room	GELI		KOJ	06/12/06
Count Room	H-3		KPW	06/11/06
Count Room	SR-90	(FAST)	KOJ	06/20/06

****

L28845-7	**WG**	**WG-DN-MW-DN-108I-052606-JL-065**		
Process step	Prod		Analyst	Date
Login			KTHURMAN	06/05/06
Aliquot	GELI		DW	06/09/06
Aliquot	H-3		SO	06/09/06
Aliquot	SR-90		LCB	06/14/06
Aliquot	SR-90	(FAST)	LCB	06/14/06
Count Room	GELI		KPW	06/12/06
Count Room	H-3		KPW	06/11/06
Count Room	SR-90		KOJ	07/01/06
Count Room	SR-90	(FAST)	KOJ	06/21/06

****

L28845-7R1	**WG**	**WG-DN-MW-DN-108I-052606-JL-065**		
Process step	Prod		Analyst	Date
Login			RCHARLES	06/05/06
Aliquot	SR-90		LCB	07/13/06
Aliquot	SR-90	(FAST)	LCB	07/13/06
Count Room	SR-90		KOJ	07/19/06
Count Room	SR-90	(FAST)	MVW	07/14/06

****

L28845-8	**WG**	**WG-DN-DSP-DN-123-052606-JL-060**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/05/06
Aliquot	GELI		DW	06/09/06
Aliquot	H-3		SO	06/09/06
Aliquot	SR-90	(FAST)	LCB	06/14/06
Count Room	GELI		KPW	06/12/06
Count Room	H-3		KPW	06/12/06
Count Room	SR-90	(FAST)	KOJ	06/20/06

****

L28845-9	**WG**	**WG-DN-DSP-DN-123-052606-JL-061**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/05/06

07/19/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28845

L28845-9	**WG**	**WG-DN-DSP-DN-123-052606-JL-061**		
Aliquot	GELI		DW	06/09/06
Aliquot	H-3		SO	06/09/06
Aliquot	SR-90	(FAST)	LCB	06/14/06
Count Room	GELI		KPW	06/12/06
Count Room	H-3		KPW	06/12/06
Count Room	SR-90	(FAST)	KOJ	06/20/06

****

L28845-10	**WG**	**WG-DN-DSP-DN-124-052606-JL-062**		
Process step	Prod		Analyst	Date
Login			BWILKERSON	06/05/06
Aliquot	H-3		SO	06/09/06
Aliquot	GELI		DW	06/10/06
Aliquot	SR-90	(FAST)	LCB	06/14/06
Count Room	GELI		ILL	06/12/06
Count Room	H-3		KPW	06/12/06
Count Room	SR-90	(FAST)	KOJ	06/20/06

Analytical Results Summary

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-103S-052606-JH-010** Collect Start: 05/26/2006 09:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.12E+02	1.11E+02	**1.77E+02**	pCi/L		10	ml		06/11/06	135	M	U		
TOTAL SR	2018	8.33E-01	7.12E-01	**1.30E+00**	pCi/L		450	ml	05/26/06 09:40	06/20/06	120	M	U		
MN-54	2007	-3.75E-01	1.99E+00	**3.26E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
CO-58	2007	-2.93E-01	2.35E+00	**3.87E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
FE-59	2007	4.47E+00	4.72E+00	**8.19E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
CO-60	2007	5.85E-01	2.15E+00	**3.58E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
ZN-65	2007	4.51E-01	4.39E+00	**7.32E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
NB-95	2007	1.77E-01	2.30E+00	**3.83E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
ZR-95	2007	1.13E+00	4.14E+00	**6.94E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
CS-134	2007	4.05E+00	4.06E+00	**3.76E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
CS-137	2007	2.49E+00	2.28E+00	**3.87E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
BA-140	2007	-1.04E+01	1.77E+01	**2.86E+01**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No
LA-140	2007	-4.99E-01	5.41E+00	**8.89E+00**	pCi/L		3078.23	ml	05/26/06 09:40	06/11/06	33791	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-103S-052606-JH-011** Collect Start: 05/26/2006 10:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-4.49E+02	9.60E+01	**1.83E+02**	pCi/L		10	ml		06/11/06	135	M	U		
TOTAL SR	2018	**1.46E+00**	8.03E-01	1.38E+00	pCi/L		450	ml	05/26/06 10:00	06/21/06	100	M	+		
MN-54	2007	2.91E+00	1.85E+00	**3.26E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
CO-58	2007	-9.72E-01	2.23E+00	**3.59E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
FE-59	2007	4.53E+00	4.66E+00	**8.05E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
CO-60	2007	1.01E+00	2.44E+00	**3.65E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		Yes
ZN-65	2007	5.37E+00	5.01E+00	**7.50E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
NB-95	2007	2.58E+00	2.20E+00	**3.81E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
ZR-95	2007	-3.12E+00	3.82E+00	**6.07E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
CS-134	2007	2.54E+00	4.10E+00	**3.27E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
CS-137	2007	7.08E-02	2.02E+00	**3.29E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
BA-140	2007	2.79E+00	1.54E+01	**2.56E+01**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No
LA-140	2007	2.37E+00	5.75E+00	**9.80E+00**	pCi/L		3084.13	ml	05/26/06 10:00	06/12/06	30078	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-103I-052606-JH-012** Collect Start: 05/26/2006 11:05 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	8.11E+01	1.11E+02	**1.79E+02**	pCi/L		10	ml		06/11/06	135	M	U		
TOTAL SR	2018	-2.55E-01	6.64E-01	**1.41E+00**	pCi/L		450	ml	05/26/06 11:05	06/20/06	120	M	U		
MN-54	2007	1.77E+00	1.81E+00	**3.09E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
CO-58	2007	-1.10E+00	2.02E+00	**3.25E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
FE-59	2007	5.62E+00	4.33E+00	**7.56E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
CO-60	2007	3.02E-01	1.82E+00	**3.03E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
ZN-65	2007	1.95E+00	3.95E+00	**6.64E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
NB-95	2007	1.32E+00	1.99E+00	**3.39E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
ZR-95	2007	-1.04E+00	3.51E+00	**5.75E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
CS-134	2007	2.12E+00	2.90E+00	**3.07E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
CS-137	2007	-1.25E+00	2.13E+00	**3.12E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
BA-140	2007	1.02E+01	1.49E+01	**2.54E+01**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No
LA-140	2007	-1.27E-01	5.18E+00	**8.57E+00**	pCi/L		3100.89	ml	05/26/06 11:05	06/12/06	30464	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L28845 R3 / 23 of 90

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

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Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-106S-052606-JH-013** Collect Start: 05/26/2006 14:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.73E+02	1.14E+02	**1.78E+02**	pCi/L		10	ml		06/11/06	135	M	U		
TOTAL SR	2018	-8.97E-02	5.51E-01	**1.14E+00**	pCi/L		450	ml	05/26/06 14:00	06/20/06	120	M	U		
MN-54	2007	1.08E+00	2.72E+00	**4.61E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
CO-58	2007	-6.54E-01	3.16E+00	**5.16E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
FE-59	2007	9.53E-01	6.25E+00	**1.05E+01**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
CO-60	2007	-1.78E-01	2.65E+00	**4.30E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
ZN-65	2007	-1.00E+00	6.20E+00	**1.01E+01**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
NB-95	2007	-4.95E-02	3.06E+00	**5.08E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
ZR-95	2007	-1.77E+00	5.66E+00	**9.01E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
CS-134	2007	1.53E+00	3.12E+00	**5.24E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
CS-137	2007	1.92E+00	2.89E+00	**4.92E+00**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
BA-140	2007	1.75E+01	2.25E+01	**3.89E+01**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	
LA-140	2007	1.30E+00	7.33E+00	**1.23E+01**	pCi/L		3065.58	ml	05/26/06 14:00	06/12/06	12062	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L28845 R3 / 24 of 90

Report of Analysis

07/19/06 16:23

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EX001-3ESPDRES-06

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-101S-052606-JL-063** Collect Start: 05/26/2006 14:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**2.20E+02**	1.14E+02	1.78E+02	pCi/L		10	ml		06/11/06	135	M	+		
TOTAL SR	2018	1.35E+00	9.48E-01	**1.69E+00**	pCi/L		450	ml	05/26/06 14:10	06/20/06	120	M	U		
MN-54	2007	-3.16E-01	2.01E+00	**3.39E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
CO-58	2007	-7.70E-01	2.30E+00	**3.86E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
FE-59	2007	5.34E+00	4.47E+00	**8.17E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
CO-60	2007	4.33E-01	1.86E+00	**3.26E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
ZN-65	2007	7.73E+00	5.03E+00	**8.07E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
NB-95	2007	2.33E+00	2.24E+00	**3.98E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
ZR-95	2007	-2.33E-01	3.93E+00	**6.68E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
CS-134	2007	1.16E+01	4.58E+00	**4.41E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U*		No
CS-137	2007	7.85E-01	2.17E+00	**3.75E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
BA-140	2007	4.94E+00	1.79E+01	**3.02E+01**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No
LA-140	2007	5.02E+00	5.21E+00	**9.66E+00**	pCi/L		3056.2	ml	05/26/06 14:10	06/12/06	27841	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

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Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-101I-052606-JL-064** Collect Start: 05/26/2006 15:35 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-6

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**4.57E+03**	2.08E+02	1.79E+02	pCi/L		10	ml		06/11/06	135	M	+	High	
TOTAL SR	2018	-4.47E-01	9.03E-01	**1.93E+00**	pCi/L		450	ml	05/26/06 15:35	06/20/06	120	M	U		
MN-54	2007	-1.17E+00	2.13E+00	**3.54E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
CO-58	2007	-1.20E+00	2.47E+00	**4.12E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
FE-59	2007	3.70E-01	4.94E+00	**8.62E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
CO-60	2007	-4.63E-01	2.11E+00	**3.61E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
ZN-65	2007	1.32E+00	4.53E+00	**8.00E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
NB-95	2007	1.23E+00	2.53E+00	**4.43E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
ZR-95	2007	-2.44E+00	4.31E+00	**7.18E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
CS-134	2007	5.65E+00	4.16E+00	**4.29E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
CS-137	2007	2.51E+00	2.40E+00	**4.29E+00**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
BA-140	2007	-1.43E+01	1.95E+01	**3.17E+01**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
LA-140	2007	-2.37E+00	6.02E+00	**1.03E+01**	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	U		No
TH-228	2007	**8.28E+00**	4.88E+00	7.17E+00	pCi/L		3108.09	ml	05/26/06 15:35	06/12/06	21600	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-108I-052606-JL-065** Collect Start: 05/26/2006 17:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-7

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.59E+02	1.12E+02	**1.76E+02**	pCi/L		10	ml		06/11/06	135	M	U		
SR-90	2019	**4.37E+00**	6.60E-01	8.21E-01	pCi/L		450	ml	05/26/06 17:00	07/01/06	400	M	+		
SR-90	2019	**2.72E+00**	1.29E+00	1.79E+00	pCi/L	R1	450	ml	05/26/06 17:00	07/19/06	100	M	+		
TOTAL SR	2018	**4.42E+00**	1.23E+00	1.77E+00	pCi/L		450	ml	05/26/06 17:00	06/21/06	100	M	+	High	
TOTAL SR	2018	**3.39E+00**	7.74E-01	1.06E+00	pCi/L	R1	450	ml	05/26/06 17:00	07/14/06	120	M	+	High	
MN-54	2007	1.03E+00	2.28E+00	**3.87E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
CO-58	2007	-1.43E+00	2.49E+00	**4.00E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
FE-59	2007	2.40E+00	5.26E+00	**8.97E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
CO-60	2007	7.64E-01	2.28E+00	**3.82E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
ZN-65	2007	1.45E+01	5.91E+00	**9.95E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U*		No
NB-95	2007	5.40E-01	2.69E+00	**4.51E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
ZR-95	2007	6.59E-01	4.90E+00	**8.01E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
CS-134	2007	5.25E+00	4.11E+00	**4.79E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
CS-137	2007	8.96E-03	2.57E+00	**4.21E+00**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
BA-140	2007	2.67E+00	1.96E+01	**3.28E+01**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No
LA-140	2007	2.50E-01	6.29E+00	**1.04E+01**	pCi/L		3058.37	ml	05/26/06 17:00	06/12/06	16511	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-DSP-DN-123-052606-JL-060** Collect Start: 05/26/2006 10:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-8

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.31E+04**	3.18E+02	1.78E+02	pCi/L		10	ml		06/12/06	135	M	+	High	
TOTAL SR	2018	1.48E+00	8.85E-01	**1.55E+00**	pCi/L		450	ml	05/26/06 10:10	06/20/06	120	M	U		
MN-54	2007	-8.17E-02	2.45E+00	**4.04E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
CO-58	2007	4.77E-02	2.81E+00	**4.65E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
FE-59	2007	3.91E+00	5.86E+00	**1.01E+01**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
CO-60	2007	1.46E+00	2.62E+00	**4.46E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
ZN-65	2007	3.33E+00	5.46E+00	**9.39E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
NB-95	2007	-1.91E+00	2.93E+00	**4.69E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
ZR-95	2007	-1.51E+00	5.27E+00	**8.61E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
CS-134	2007	5.03E+00	4.15E+00	**4.50E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
CS-137	2007	-2.53E+00	2.62E+00	**4.05E+00**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
BA-140	2007	-9.58E+00	2.23E+01	**3.62E+01**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No
LA-140	2007	8.75E-01	7.25E+00	**1.21E+01**	pCi/L		3127.73	ml	05/26/06 10:10	06/12/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L28845 R3 / 28 of 90

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-DSP-DN-123-052606-JL-061** Collect Start: 05/26/2006 10:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-9

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.32E+04**	3.19E+02	1.78E+02	pCi/L		10	ml		06/12/06	135	M	+	High	
TOTAL SR	2018	7.32E-01	8.71E-01	**1.64E+00**	pCi/L		450	ml	05/26/06 10:20	06/20/06	120	M	U		
K-40	2007	**7.50E+01**	4.87E+01	3.94E+01	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	+		Yes
MN-54	2007	-7.12E-01	2.56E+00	**4.12E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
CO-58	2007	-1.94E-01	2.82E+00	**4.60E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
FE-59	2007	-1.44E+00	6.06E+00	**9.89E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
CO-60	2007	5.95E-01	2.48E+00	**4.15E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
ZN-65	2007	1.48E+00	5.47E+00	**9.21E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
NB-95	2007	6.30E-01	2.93E+00	**4.87E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
ZR-95	2007	3.05E+00	5.01E+00	**8.50E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
CS-134	2007	-7.06E-01	3.01E+00	**4.28E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
CS-137	2007	2.23E+00	2.60E+00	**4.48E+00**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
BA-140	2007	5.92E+00	2.16E+01	**3.55E+01**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No
LA-140	2007	3.95E+00	7.15E+00	**1.24E+01**	pCi/L		3064.03	ml	05/26/06 10:20	06/12/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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Bolded text indicates reportable value.

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**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

07/19/06 16:23

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28845

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-DSP-DN-124-052606-JL-062** Collect Start: 05/26/2006 12:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 06/05/2006 % Moisture:
LIMS Number: L28845-10

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.00E+04**	2.84E+02	1.79E+02	pCi/L		10	ml		06/12/06	135	M	+	High	
TOTAL SR	2018	4.00E-01	6.42E-01	**1.23E+00**	pCi/L		450	ml	05/26/06 12:00	06/20/06	120	M	U		
MN-54	2007	-8.31E-01	2.83E+00	**4.81E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
CO-58	2007	-1.08E+00	3.26E+00	**5.53E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
FE-59	2007	4.89E+00	6.74E+00	**1.25E+01**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
CO-60	2007	1.61E+00	2.85E+00	**5.28E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
ZN-65	2007	7.81E+00	6.48E+00	**1.23E+01**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
NB-95	2007	4.76E+00	3.47E+00	**6.47E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
ZR-95	2007	-3.55E+00	5.92E+00	**9.88E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
CS-134	2007	1.55E+00	5.14E+00	**5.85E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
CS-137	2007	3.23E-02	3.18E+00	**5.53E+00**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
BA-140	2007	1.38E+00	2.58E+01	**4.39E+01**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No
LA-140	2007	4.08E+00	7.84E+00	**1.48E+01**	pCi/L		2992.17	ml	05/26/06 12:00	06/12/06	12452	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28845

7/19/2006 4:22:19PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4110-1	H-3	WO	06/11/2006 4:13	< 1.700E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4110-2	H-3	WO	06/11/2006 5:16	5.05E+002	4.930E+02	pCi/Total	97.7	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4110-3	H-3	WG	06/11/2006 5:35	3.050E+02	2.380E+02	pCi/L		<30	*	NE
L28846-1										

L28845 H-3

Associated Samples for WG4110

SAMPLENUM	CLIENTID
L28845-1	WG-DN-MW-DN-103S-052606-JH-010
L28845-2	WG-DN-MW-DN-103S-052606-JH-011
L28845-3	WG-DN-MW-DN-103I-052606-JH-012
L28845-4	WG-DN-MW-DN-106S-052606-JH-013
L28845-5	WG-DN-MW-DN-101S-052606-JL-063
L28845-6	WG-DN-MW-DN-101I-052606-JL-064
L28845-7	WG-DN-MW-DN-108I-052606-JL-065
L28845-8	WG-DN-DSP-DN-123-052606-JL-060
L28845-9	WG-DN-DSP-DN-123-052606-JL-061
L28845-10	WG-DN-DSP-DN-124-052606-JL-062

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28845

7/19/2006 4:22:19PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

SR-90

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4230-1	SR-90	WO	07/14/2006 13:53	< 5.950E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4230-2	SR-90	WO	07/14/2006 13:53	2.11E+002	1.800E+02	pCi/Total	85.3	70-130	+	P

Spike ID: 90SR-0406051-1
Spike conc: 2.11E+002
Spike Vol: 1.00E+000

L28845 SR-90

Associated Samples for WG4162

SAMPLENUM	CLIENTID
L28845-1	WG-DN-MW-DN-103S-052606-JH-010
L28845-2	WG-DN-MW-DN-103S-052606-JH-011
L28845-3	WG-DN-MW-DN-103I-052606-JH-012
L28845-4	WG-DN-MW-DN-106S-052606-JH-013
L28845-5	WG-DN-MW-DN-101S-052606-JL-063
L28845-6	WG-DN-MW-DN-101I-052606-JL-064
L28845-7	WG-DN-MW-DN-108I-052606-JL-065
L28845-8	WG-DN-DSP-DN-123-052606-JL-060
L28845-9	WG-DN-DSP-DN-123-052606-JL-061
L28845-10	WG-DN-DSP-DN-124-052606-JL-062

Associated Samples for WG4230

SAMPLENUM	CLIENTID
L28845-7R1	WG-DN-MW-DN-108I-052606-JL-065

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28845

7/19/2006 4:22:19PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4162-1	TOTAL SR	WO	06/20/2006 20:27	< 7.860E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4162-2	TOTAL SR	WO	06/20/2006 20:27	5.84E+001	6.250E+01	pCi/Total	107.1	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4162-3 L28864-1	TOTAL SR	WG	06/20/2006 20:27	< 1.630E+00	< 1.570E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jul 03 2006, 03:49 pm

Work Order: *L28845* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28845-1		H-3		10 ml			0		11-jun-06 09:43	LS5	570	135	3.73	135	.198		SO
WG-DN-MW-DN-103S-052606-JH-010																	
Activity: 1.12E+02 Error: 1.11E+02			MDC: 1.77E+02 *														
L28845-2		H-3		10 ml			0		11-jun-06 12:02	LS5	247	135	3.73	135	.191		SO
WG-DN-MW-DN-103S-052606-JH-011																	
Activity: -4.49E+02 Error: 9.6E+01			MDC: 1.83E+02 *														
L28845-3		H-3		10 ml			0		11-jun-06 14:21	LS5	551	135	3.73	135	.195		SO
WG-DN-MW-DN-103I-052606-JH-012																	
Activity: 8.11E+01 Error: 1.11E+02			MDC: 1.79E+02 *														
L28845-4		H-3		10 ml			0		11-jun-06 16:40	LS5	605	135	3.73	135	.196		SO
WG-DN-MW-DN-106S-052606-JH-013																	
Activity: 1.73E+02 Error: 1.14E+02			MDC: 1.78E+02 *														
L28845-5		H-3		10 ml			0		11-jun-06 18:58	LS5	633	135	3.73	135	.197		SO
WG-DN-MW-DN-101S-052606-JL-063																	
Activity: 2.2E+02 * Error: 1.14E+02			MDC: 1.78E+02														
L28845-6		H-3		10 ml			0		11-jun-06 21:16	LS5	3166	135	3.73	135	.195		SO
WG-DN-MW-DN-101I-052606-JL-064																	
Activity: 4.57E+03 * Error: 2.08E+02			MDC: 1.79E+02														
L28845-7		H-3		10 ml			0		11-jun-06 23:34	LS5	598	135	3.73	135	.199		SO
WG-DN-MW-DN-108I-052606-JL-065																	
Activity: 1.59E+02 Error: 1.12E+02			MDC: 1.76E+02 *														
L28845-8		H-3		10 ml			0		12-jun-06 01:52	LS5	8170	135	3.73	135	.196		SO
WG-DN-DSP-DN-123-052606-JL-060																	
Activity: 1.31E+04 * Error: 3.18E+02			MDC: 1.78E+02														
L28845-9		H-3		10 ml			0		12-jun-06 04:11	LS5	8242	135	3.73	135	.196		SO
WG-DN-DSP-DN-123-052606-JL-061																	
Activity: 1.32E+04 * Error: 3.19E+02			MDC: 1.78E+02														
L28845-10		H-3		10 ml			0		12-jun-06 06:29	LS5	6348	135	3.73	135	.195		SO
WG-DN-DSP-DN-124-052606-JL-062																	
Activity: 1E+04 * Error: 2.84E+02			MDC: 1.79E+02														

Raw Data Sheet (rawdata)
Jul 19 2006, 04:39 pm

Work Order: *L28845* Customer: *Exelon*

Nuclide: *SR-90* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28845-7		SR-90	26-may-06 17:00	450 ml	20-jun-06 15:00	30-jun-06 09:00	0.0346	102.37 43.01	01-jul-06 01:05	Y3D	459	400	305	800	.498	.8	LCB
WG-DN-MW-DN-108I-052606-JL-065																	
Activity: 4.37E+00 * Error: 6.6E-01				MDC: 8.21E-01													
L28845-7	R1	SR-90	26-may-06 17:00	450 ml	14-jul-06 07:00	18-jul-06 09:15	0.0359	106.21 90.86	19-jul-06 16:51	X1B	132	100	72	100	.49	.468	LCB
WG-DN-MW-DN-108I-052606-JL-065																	
Activity: 2.72E+00 * Error: 1.29E+00				MDC: 1.79E+00													

Work Order: *L28845* Customer: *Exelon* Page: 3

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28845-1		TOTAL SR	26-may-06 09:40	450 ml	20-jun-06 15:00		0	80.38	20-jun-06 20:31	Y1A	111	120	279	400	.341	.998	LCB
WG-DN-MW-DN-103S-052606-JH-010																	
Activity: 8.33E-01 Error: 7.12E-01 MDC: 1.3E+00 *																	
L28845-2		TOTAL SR	26-may-06 10:00	450 ml	20-jun-06 15:00		0	83.06	21-jun-06 00:37	Y1A	111	100	279	400	.341	.998	LCB
WG-DN-MW-DN-103S-052606-JH-011																	
Activity: 1.46E+00 * Error: 8.03E-01 MDC: 1.38E+00																	
L28845-3		TOTAL SR	26-may-06 11:05	450 ml	20-jun-06 15:00		0	76.08	20-jun-06 20:31	Y1C	82	120	300	400	.345	.998	LCB
WG-DN-MW-DN-103I-052606-JH-012																	
Activity: -2.55E-01 Error: 6.64E-01 MDC: 1.41E+00 *																	
L28845-4		TOTAL SR	26-may-06 14:00	450 ml	20-jun-06 15:00		0	90.05	20-jun-06 20:31	Y1D	88	120	305	400	.362	.998	LCB
WG-DN-MW-DN-106S-052606-JH-013																	
Activity: -8.97E-02 Error: 5.51E-01 MDC: 1.14E+00 *																	
L28845-5		TOTAL SR	26-may-06 14:10	450 ml	20-jun-06 15:00		0	60.48	20-jun-06 20:31	Y2A	118	120	280	400	.349	.998	LCB
WG-DN-MW-DN-101S-052606-JL-063																	
Activity: 1.35E+00 Error: 9.48E-01 MDC: 1.69E+00 *																	
L28845-6		TOTAL SR	26-may-06 15:35	450 ml	20-jun-06 15:00		0	55.11	20-jun-06 20:31	Y2B	84	120	315	400	.356	.998	LCB
WG-DN-MW-DN-101I-052606-JL-064																	
Activity: -4.47E-01 Error: 9.03E-01 MDC: 1.93E+00 *																	
L28845-7		TOTAL SR	26-may-06 17:00	450 ml	20-jun-06 15:00		0	62.90	21-jun-06 00:37	Y1B	167	100	279	400	.351	.998	LCB
WG-DN-MW-DN-108I-052606-JL-065																	
Activity: 4.42E+00 * Error: 1.23E+00 MDC: 1.77E+00																	
L28845-7	R1	TOTAL SR	26-may-06 17:00	450 ml	14-jul-06 07:00		0	97.04	14-jul-06 13:53	X1C	226	120	289	400	.354	.997	LCB
WG-DN-MW-DN-108I-052606-JL-065																	
Activity: 3.39E+00 * Error: 7.74E-01 MDC: 1.06E+00																	
L28845-8		TOTAL SR	26-may-06 10:10	450 ml	20-jun-06 15:00		0	67.74	20-jun-06 20:31	Y3A	129	120	291	400	.347	.998	LCB
WG-DN-DSP-DN-123-052606-JL-060																	
Activity: 1.48E+00 Error: 8.85E-01 MDC: 1.55E+00 *																	
L28845-9		TOTAL SR	26-may-06 10:20	450 ml	20-jun-06 15:00		0	63.98	20-jun-06 20:31	Y3B	107	120	292	400	.346	.998	LCB
WG-DN-DSP-DN-123-052606-JL-061																	
Activity: 7.32E-01 Error: 8.71E-01 MDC: 1.64E+00 *																	
L28845-10		TOTAL SR	26-may-06 12:00	450 ml	20-jun-06 15:00		0	79.57	20-jun-06 20:31	Y3D	92	120	262	400	.352	.998	LCB
WG-DN-DSP-DN-124-052606-JL-062																	
Activity: 4E-01 Error: 6.42E-01 MDC: 1.23E+00 *																	

Sec. Review: Analyst: LIMS: V

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 09:05:07.35
TBE10 12892256 HpGe ********** Aquisition Date/Time: 11-JUN-2006 23:41:48.88

LIMS No., Customer Name, Client ID: WG L28845-1 EX DRES

Sample ID	: 10L28845-1		Smple Date: 26-MAY-2006 09:40:00.
Sample Type	: WG		Geometry : 103L083004
Quantity	: 3.07820E+00 L		BKGFILE : 10BG060306MT
Start Channel	: 80	Energy Tol : 1.00000	Real Time : 0 09:23:16.42
End Channel	: 4090	Pk Srch Sens: 5.00000	Live time : 0 09:23:10.86
MDA Constant	: 0.00	Library Used: LIBD	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.53*	222	992	1.24	132.18	7.35E-01	6.58E-03	27.5	1.38E+00
2	1	92.72*	6	907	1.05	184.57	1.52E+00	1.71E-04	*****	7.56E-01
3	1	139.83	174	1091	0.87	278.83	1.91E+00	5.15E-03	34.8	5.76E-01
4	1	185.60*	7	823	1.42	370.42	1.77E+00	1.99E-04	899.3	1.65E+00
5	1	198.47*	221	962	1.88	396.16	1.71E+00	6.55E-03	31.8	1.56E+00
6	1	238.72*	50	760	1.33	476.70	1.54E+00	1.49E-03	122.2	1.99E+00
7	1	352.24*	83	430	2.15	703.86	1.17E+00	2.45E-03	61.0	1.06E+00
8	1	501.21	96	370	5.07	1001.97	8.96E-01	2.84E-03	47.4	3.05E+00
9	1	583.56*	13	229	2.24	1166.79	7.98E-01	3.81E-04	295.6	1.68E+00
10	1	595.69	141	194	2.45	1191.06	7.86E-01	4.17E-03	23.0	3.03E+00
11	1	609.33*	65	252	1.60	1218.36	7.72E-01	1.93E-03	60.5	1.43E+00
12	1	911.72*	10	147	2.00	1823.58	5.64E-01	2.93E-04	301.2	3.36E-01
13	1	1765.72	50	31	3.60	3533.29	3.39E-01	1.48E-03	26.5	2.75E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	7	3.28*	1.772E+00	3.004E+00	3.004E+00	1798.58
AC-228	835.50	------	1.75	6.047E-01	------	Line Not Found	------
	911.07	10	27.70*	5.644E-01	1.646E+00	1.655E+00	602.45
TH-228	238.63	50	44.60*	1.538E+00	1.904E+00	1.936E+00	244.31
	240.98	------	3.95	1.529E+00	------	Line Not Found	------
TH-232	583.14	13	30.25	7.982E-01	1.386E+00	1.386E+00	591.14
	911.07	10	27.70*	5.644E-01	1.646E+00	1.646E+00	602.45
	969.11	------	16.60	5.377E-01	------	Line Not Found	------
U-235	143.76	------	10.50*	1.905E+00	------	Line Not Found	------
	163.35	------	4.70	1.860E+00	------	Line Not Found	------
	185.71	7	54.00	1.772E+00	1.825E-01	1.825E-01	1798.58
	205.31	------	4.70	1.684E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28845-1 Acquisition date : 11-JUN-2006 23:41:48

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	3.004E+00	3.004E+00	54.04E+00	1798.58	
AC-228	5.75Y	1.01	1.646E+00	1.655E+00	9.971E+00	602.45	
TH-228	1.91Y	1.02	1.904E+00	1.936E+00	4.729E+00	244.31	
TH-232	1.41E+10Y	1.00	1.646E+00	1.646E+00	9.915E+00	602.45	
U-235	7.04E+08Y	1.00	1.825E-01	1.825E-01	32.82E-01	1798.58	K
			---------	---------			
	Total Activity :		8.382E+00	8.423E+00			
	Grand Total Activity :		8.382E+00	8.423E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28845-1

Acquisition date : 11-JUN-2006 23:41:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.53	222	992	1.24	132.18	128	8	6.58E-03	55.1	7.35E-01	
1	92.72	6	907	1.05	184.57	181	8	1.71E-04	****	1.52E+00	
1	139.83	174	1091	0.87	278.83	275	9	5.15E-03	69.7	1.91E+00	
1	198.47	221	962	1.88	396.16	391	12	6.55E-03	63.6	1.71E+00	
1	352.24	83	430	2.15	703.86	698	13	2.45E-03	****	1.17E+00	
1	501.21	96	370	5.07	1001.97	994	17	2.84E-03	94.7	8.96E-01	
1	595.69	141	194	2.45	1191.06	1183	14	4.17E-03	46.1	7.86E-01	
1	609.33	65	252	1.60	1218.36	1213	13	1.93E-03	****	7.72E-01	
1	1765.72	50	31	3.60	3533.29	3528	13	1.48E-03	53.0	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	3.004E+00	3.004E+00	54.04E+00	1798.58	
AC-228	5.75Y	1.01	2.599E-01	2.613E-01	129.3E-01	4948.84	
TH-228	1.91Y	1.02	1.904E+00	1.936E+00	4.729E+00	244.31	
TH-232	1.41E+10Y	1.00	1.386E+00	1.386E+00	8.193E+00	591.14	
Total Activity :			6.554E+00	6.587E+00			

Grand Total Activity : 6.554E+00 6.587E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	3.004E+00	5.404E+01	7.903E+01	0.000E+00	0.038
AC-228	2.613E-01	1.293E+01	1.183E+01	0.000E+00	0.022
TH-228	1.936E+00	4.729E+00	5.990E+00	0.000E+00	0.323
TH-232	1.386E+00	8.193E+00	1.301E+01	0.000E+00	0.107

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.724E+01		2.064E+01	3.335E+01	0.000E+00	-0.517
NA-24	-6.739E+01		1.263E+02	Half-Life too short		
K-40	-1.741E+00		3.222E+01	5.386E+01	0.000E+00	-0.032
CR-51	-3.330E+01		2.627E+01	4.187E+01	0.000E+00	-0.795
MN-54	-3.747E-01		1.990E+00	3.256E+00	0.000E+00	-0.115
CO-57	-1.632E+00		2.051E+00	3.349E+00	0.000E+00	-0.487
CO-58	-2.934E-01		2.354E+00	3.871E+00	0.000E+00	-0.076
FE-59	4.466E+00		4.717E+00	8.190E+00	0.000E+00	0.545
CO-60	5.849E-01		2.147E+00	3.577E+00	0.000E+00	0.164
ZN-65	4.509E-01		4.392E+00	7.318E+00	0.000E+00	0.062
SE-75	-3.149E+00		2.998E+00	4.857E+00	0.000E+00	-0.648
SR-85	2.202E+01		2.866E+00	5.451E+00	0.000E+00	4.040
Y-88	1.075E+00		2.577E+00	4.341E+00	0.000E+00	0.248
NB-94	-9.726E-01		2.059E+00	3.288E+00	0.000E+00	-0.296
NB-95	1.774E-01		2.302E+00	3.829E+00	0.000E+00	0.046
ZR-95	1.130E+00		4.136E+00	6.937E+00	0.000E+00	0.163
MO-99	-2.208E+02		9.923E+02	1.634E+03	0.000E+00	-0.135
RU-103	3.292E+00		3.193E+00	4.680E+00	0.000E+00	0.703
RU-106	2.801E+00		2.053E+01	3.240E+01	0.000E+00	0.086
AG-110m	2.041E-01		2.155E+00	3.530E+00	0.000E+00	0.058
SN-113	-1.615E+00		2.947E+00	4.730E+00	0.000E+00	-0.341
SB-124	-1.642E+00		5.916E+00	3.964E+00	0.000E+00	-0.414
SB-125	1.019E+00		5.920E+00	9.667E+00	0.000E+00	0.105
TE-129M	1.239E+01		3.137E+01	5.276E+01	0.000E+00	0.235
I-131	1.785E+00		8.904E+00	1.444E+01	0.000E+00	0.124
BA-133	3.236E+00		3.419E+00	4.904E+00	0.000E+00	0.660
CS-134	4.051E+00		4.059E+00	3.764E+00	0.000E+00	1.076
CS-136	4.383E+00		4.744E+00	8.138E+00	0.000E+00	0.539
CS-137	2.491E+00		2.278E+00	3.869E+00	0.000E+00	0.644
CE-139	-1.363E+00		2.207E+00	3.576E+00	0.000E+00	-0.381
BA-140	-1.037E+01		1.768E+01	2.858E+01	0.000E+00	-0.363
LA-140	-4.990E-01		5.410E+00	8.888E+00	0.000E+00	-0.056
CE-141	9.074E+00		5.595E+00	8.128E+00	0.000E+00	1.116
CE-144	6.509E+00		1.866E+01	2.637E+01	0.000E+00	0.247
EU-152	-1.666E+00		7.751E+00	1.065E+01	0.000E+00	-0.156
EU-154	-3.757E+00		4.170E+00	6.794E+00	0.000E+00	-0.553
U-235	2.738E+01		1.858E+01	2.688E+01	0.000E+00	1.018
U-238	1.758E+02		2.242E+02	3.800E+02	0.000E+00	0.463
AM-241	-2.037E+01		1.998E+01	2.804E+01	0.000E+00	-0.727

```
A,10L28845-1      ,06/12/2006 09:05,05/26/2006 09:40,   3.078E+00,WG L28845-1 EX
B,10L28845-1      ,LIBD                ,06/07/2006 09:32,103L083004
C,RA-226  ,YES,   3.004E+00,   5.404E+01,   7.903E+01,,    0.038
C,AC-228  ,YES,   2.613E-01,   1.293E+01,   1.183E+01,,    0.022
C,TH-228  ,YES,   1.936E+00,   4.729E+00,   5.990E+00,,    0.323
C,TH-232  ,YES,   1.386E+00,   8.193E+00,   1.301E+01,,    0.107
C,BE-7    ,NO ,  -1.724E+01,   2.064E+01,   3.335E+01,,   -0.517
C,K-40    ,NO ,  -1.741E+00,   3.222E+01,   5.386E+01,,   -0.032
C,CR-51   ,NO ,  -3.330E+01,   2.627E+01,   4.187E+01,,   -0.795
C,MN-54   ,NO ,  -3.747E-01,   1.990E+00,   3.256E+00,,   -0.115
C,CO-57   ,NO ,  -1.632E+00,   2.051E+00,   3.349E+00,,   -0.487
C,CO-58   ,NO ,  -2.934E-01,   2.354E+00,   3.871E+00,,   -0.076
C,FE-59   ,NO ,   4.466E+00,   4.717E+00,   8.190E+00,,    0.545
C,CO-60   ,NO ,   5.849E-01,   2.147E+00,   3.577E+00,,    0.164
C,ZN-65   ,NO ,   4.509E-01,   4.392E+00,   7.318E+00,,    0.062
C,SE-75   ,NO ,  -3.149E+00,   2.998E+00,   4.857E+00,,   -0.648
C,SR-85   ,NO ,   2.202E+01,   2.866E+00,   5.451E+00,,    4.040
C,Y-88    ,NO ,   1.075E+00,   2.577E+00,   4.341E+00,,    0.248
C,NB-94   ,NO ,  -9.726E-01,   2.059E+00,   3.288E+00,,   -0.296
C,NB-95   ,NO ,   1.774E-01,   2.302E+00,   3.829E+00,,    0.046
C,ZR-95   ,NO ,   1.130E+00,   4.136E+00,   6.937E+00,,    0.163
C,MO-99   ,NO ,  -2.208E+02,   9.923E+02,   1.634E+03,,   -0.135
C,RU-103  ,NO ,   3.292E+00,   3.193E+00,   4.680E+00,,    0.703
C,RU-106  ,NO ,   2.801E+00,   2.053E+01,   3.240E+01,,    0.086
C,AG-110m ,NO ,   2.041E-01,   2.155E+00,   3.530E+00,,    0.058
C,SN-113  ,NO ,  -1.615E+00,   2.947E+00,   4.730E+00,,   -0.341
C,SB-124  ,NO ,  -1.642E+00,   5.916E+00,   3.964E+00,,   -0.414
C,SB-125  ,NO ,   1.019E+00,   5.920E+00,   9.667E+00,,    0.105
C,TE-129M ,NO ,   1.239E+01,   3.137E+01,   5.276E+01,,    0.235
C,I-131   ,NO ,   1.785E+00,   8.904E+00,   1.444E+01,,    0.124
C,BA-133  ,NO ,   3.236E+00,   3.419E+00,   4.904E+00,,    0.660
C,CS-134  ,NO ,   4.051E+00,   4.059E+00,   3.764E+00,,    1.076
C,CS-136  ,NO ,   4.383E+00,   4.744E+00,   8.138E+00,,    0.539
C,CS-137  ,NO ,   2.491E+00,   2.278E+00,   3.869E+00,,    0.644
C,CE-139  ,NO ,  -1.363E+00,   2.207E+00,   3.576E+00,,   -0.381
C,BA-140  ,NO ,  -1.037E+01,   1.768E+01,   2.858E+01,,   -0.363
C,LA-140  ,NO ,  -4.990E-01,   5.410E+00,   8.888E+00,,   -0.056
C,CE-141  ,NO ,   9.074E+00,   5.595E+00,   8.128E+00,,    1.116
C,CE-144  ,NO ,   6.509E+00,   1.866E+01,   2.637E+01,,    0.247
C,EU-152  ,NO ,  -1.666E+00,   7.751E+00,   1.065E+01,,   -0.156
C,EU-154  ,NO ,  -3.757E+00,   4.170E+00,   6.794E+00,,   -0.553
C,U-235   ,NO ,   2.738E+01,   1.858E+01,   2.688E+01,,    1.018
C,U-238   ,NO ,   1.758E+02,   2.242E+02,   3.800E+02,,    0.463
C,AM-241  ,NO ,  -2.037E+01,   1.998E+01,   2.804E+01,,   -0.727
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 22:54:45.23
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 12-JUN-2006 14:33:14.25

LIMS No., Customer Name, Client ID: L28845-2 WG DRESDEN

Sample ID : 04L28845-2
Sample Type : WG
Quantity : 3.08410E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 10:00:00.
Geometry : 043L082004
BKGFILE : 04BG060306MT
Real Time : 0 08:21:23.55
Live time : 0 08:21:18.48

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	6	63.50*	115	603	1.21	127.58	5.61E-01	3.83E-03	40.7	2.33E+00
2	6	66.22*	258	738	1.32	133.01	6.60E-01	8.59E-03	20.6	
3	1	73.72*	557	1564	2.90	148.02	9.38E-01	1.85E-02	16.2	2.62E+01
4	1	92.52*	0	689	1.05	185.66	1.53E+00	1.31E-06	*****	1.11E+00
5	1	139.84	225	686	1.04	280.35	2.04E+00	7.47E-03	22.2	9.88E-01
6	1	174.76	107	563	1.40	350.25	1.97E+00	3.55E-03	39.4	1.26E+00
7	1	185.58*	60	809	2.19	371.90	1.92E+00	1.99E-03	107.3	4.25E+00
8	1	198.55*	219	670	1.52	397.85	1.86E+00	7.27E-03	27.1	3.68E+00
9	1	295.23	47	328	1.01	591.35	1.45E+00	1.55E-03	69.0	1.58E+00
10	1	351.73*	28	200	1.15	704.41	1.28E+00	9.19E-04	114.9	3.05E+00
11	1	583.27*	26	163	1.75	1167.74	8.77E-01	8.77E-04	113.7	7.99E-01
12	1	595.99	98	167	1.70	1193.19	8.63E-01	3.25E-03	28.0	2.83E+00
13	1	609.07*	113	98	2.46	1219.37	8.49E-01	3.75E-03	27.6	1.37E+00
14	1	911.15*	12	110	2.12	1823.77	6.21E-01	3.85E-04	228.0	8.71E-01
15	1	1120.14*	56	75	3.31	2241.86	5.27E-01	1.88E-03	41.1	1.00E+00
16	1	1173.79*	18	60	2.62	2349.18	5.08E-01	5.82E-04	120.7	8.60E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: activation

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CO-60	1173.22	18	100.00	5.083E-01	1.004E+00	1.010E+00	241.36
	1332.49	------	100.00*	4.604E-01	------	Line Not Found	------

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	60	3.28*	1.923E+00	2.767E+01	2.767E+01	214.69
AC-228	835.50	------	1.75	6.649E-01	------	Line Not Found	------
	911.07	12	27.70*	6.211E-01	1.963E+00	1.974E+00	456.08
TH-232	583.14	26	30.25	8.771E-01	2.895E+00	2.895E+00	227.33
	911.07	12	27.70*	6.211E-01	1.963E+00	1.963E+00	456.08

163.35	------	4.70	2.007E+00	------	Line Not Found	------
185.71	60	54.00	1.923E+00	1.681E+00	1.681E+00	214.69
205.31	------	4.70	1.833E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28845-2 Acquisition date : 12-JUN-2006 14:33:14

Total number of lines in spectrum	16	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	4	25.00%

Nuclide Type : activation

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.01	1.004E+00	1.010E+00	2.438E+00	241.36	K
Total Activity :			1.004E+00	1.010E+00			

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	2.767E+01	2.767E+01	5.941E+01	214.69	
AC-228	5.75Y	1.01	1.963E+00	1.974E+00	9.003E+00	456.08	
TH-232	1.41E+10Y	1.00	1.963E+00	1.963E+00	8.952E+00	456.08	
U-235	7.04E+08Y	1.00	1.681E+00	1.681E+00	3.609E+00	214.69	K
Total Activity :			3.328E+01	3.329E+01			
Grand Total Activity :			3.428E+01	3.430E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28845-2 Acquisition date : 12-JUN-2006 14:33:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	63.50	115	603	1.21	127.58	123	15	3.83E-03	81.4	5.61E-01	
6	66.22	258	738	1.32	133.01	123	15	8.59E-03	41.2	6.60E-01	
1	73.72	557	1564	2.90	148.02	140	15	1.85E-02	32.4	9.38E-01	
1	92.52	0	689	1.05	185.66	182	8	1.31E-06	****	1.53E+00	
1	139.84	225	686	1.04	280.35	276	9	7.47E-03	44.3	2.04E+00	
1	174.76	107	563	1.40	350.25	347	8	3.55E-03	78.9	1.97E+00	
1	198.55	219	670	1.52	397.85	392	11	7.27E-03	54.2	1.86E+00	
1	295.23	47	328	1.01	591.35	587	8	1.55E-03	****	1.45E+00	
1	351.73	28	200	1.15	704.41	701	7	9.19E-04	****	1.28E+00	
1	595.99	98	167	1.70	1193.19	1189	11	3.25E-03	56.0	8.63E-01	
1	609.07	113	98	2.46	1219.37	1214	11	3.75E-03	55.1	8.49E-01	
1	1120.14	56	75	3.31	2241.86	2236	16	1.88E-03	82.2	5.27E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	16	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	4	25.00%

Nuclide Type : activation

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.01	1.004E+00	1.010E+00	2.438E+00	241.36	
			---	---			
	Total Activity :		1.004E+00	1.010E+00			

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	2.767E+01	2.767E+01	5.941E+01	214.69	
TH-232	1.41E+10Y	1.00	2.568E+00	2.568E+00	5.302E+00	206.49	
			---	---			
	Total Activity :		3.024E+01	3.024E+01			

Grand Total Activity : 3.125E+01 3.125E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
CO-60	1.010E+00	2.438E+00	3.651E+00	0.000E+00	0.277
RA-226	2.767E+01	5.941E+01	6.655E+01	0.000E+00	0.416
TH-232	2.568E+00	5.302E+00	1.088E+01	0.000E+00	0.236

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.024E+01		1.863E+01	3.216E+01	0.000E+00	0.630
NA-24	-6.872E+02		2.335E+02	Half-Life too short		
K-40	-1.708E+00		3.006E+01	4.920E+01	0.000E+00	-0.035
CR-51	-2.599E+01		2.289E+01	3.675E+01	0.000E+00	-0.707
MN-54	2.912E+00		1.846E+00	3.257E+00	0.000E+00	0.894
CO-57	-1.320E+00		1.725E+00	2.762E+00	0.000E+00	-0.478
CO-58	-9.722E-01		2.231E+00	3.593E+00	0.000E+00	-0.271
FE-59	4.530E+00		4.660E+00	8.049E+00	0.000E+00	0.563
ZN-65	5.366E+00		5.013E+00	7.502E+00	0.000E+00	0.715
SE-75	-9.332E-01		2.594E+00	4.169E+00	0.000E+00	-0.224
SR-85	1.972E+01		2.601E+00	5.122E+00	0.000E+00	3.850
Y-88	-1.870E+00		2.368E+00	3.642E+00	0.000E+00	-0.513
NB-94	1.556E-02		1.781E+00	2.961E+00	0.000E+00	0.005
NB-95	2.578E+00		2.198E+00	3.813E+00	0.000E+00	0.676
ZR-95	-3.124E+00		3.819E+00	6.071E+00	0.000E+00	-0.515
MO-99	7.958E+01		1.061E+03	1.762E+03	0.000E+00	0.045
RU-103	2.491E+00		2.505E+00	4.297E+00	0.000E+00	0.580
RU-106	3.518E+00		1.768E+01	2.911E+01	0.000E+00	0.121
AG-110m	1.073E-01		1.889E+00	3.079E+00	0.000E+00	0.035
SN-113	-9.175E-01		2.572E+00	4.162E+00	0.000E+00	-0.220
SB-124	4.247E-01		4.857E+00	3.593E+00	0.000E+00	0.118
SB-125	-7.271E-01		5.248E+00	8.501E+00	0.000E+00	-0.086
TE-129M	4.095E+01		2.957E+01	5.029E+01	0.000E+00	0.814
I-131	-9.647E+00		7.764E+00	1.224E+01	0.000E+00	-0.788
BA-133	4.276E+00		2.778E+00	4.169E+00	0.000E+00	1.026
CS-134	2.537E+00		4.104E+00	3.273E+00	0.000E+00	0.775
CS-136	1.791E+00		4.311E+00	7.227E+00	0.000E+00	0.248
CS-137	7.075E-02		2.020E+00	3.289E+00	0.000E+00	0.022
CE-139	4.390E-01		1.762E+00	2.953E+00	0.000E+00	0.149
BA-140	2.794E+00		1.538E+01	2.557E+01	0.000E+00	0.109
LA-140	2.372E+00		5.754E+00	9.803E+00	0.000E+00	0.242
CE-141	3.340E+00		4.603E+00	6.505E+00	0.000E+00	0.513
CE-144	-9.556E-01		1.561E+01	2.161E+01	0.000E+00	-0.044
EU-152	-4.209E+00		6.232E+00	9.052E+00	0.000E+00	-0.465
EU-154	2.810E-01		3.465E+00	5.653E+00	0.000E+00	0.050
AC-228	1.974E+00		9.003E+00	1.283E+01	0.000E+00	0.154
TH-228	2.992E+00		3.871E+00	6.105E+00	0.000E+00	0.490
U-235	2.338E+01		1.444E+01	2.101E+01	0.000E+00	1.112
U-238	1.157E+02		1.984E+02	3.386E+02	0.000E+00	0.342
AM-241	1.301E+01		1.950E+01	2.758E+01	0.000E+00	0.472

```
A,04L28845-2       ,06/12/2006 22:54,05/26/2006 10:00,   3.084E+00,L28845-2 WG DR
B,04L28845-2       ,LIBD                ,06/12/2006 10:58,043L082004
C,CO-60    ,YES,    1.010E+00,    2.438E+00,    3.651E+00,,     0.277
C,RA-226   ,YES,    2.767E+01,    5.941E+01,    6.655E+01,,     0.416
C,TH-232   ,YES,    2.568E+00,    5.302E+00,    1.088E+01,,     0.236
C,BE-7     ,NO ,    2.024E+01,    1.863E+01,    3.216E+01,,     0.630
C,K-40     ,NO ,   -1.708E+00,    3.006E+01,    4.920E+01,,    -0.035
C,CR-51    ,NO ,   -2.599E+01,    2.289E+01,    3.675E+01,,    -0.707
C,MN-54    ,NO ,    2.912E+00,    1.846E+00,    3.257E+00,,     0.894
C,CO-57    ,NO ,   -1.320E+00,    1.725E+00,    2.762E+00,,    -0.478
C,CO-58    ,NO ,   -9.722E-01,    2.231E+00,    3.593E+00,,    -0.271
C,FE-59    ,NO ,    4.530E+00,    4.660E+00,    8.049E+00,,     0.563
C,ZN-65    ,NO ,    5.366E+00,    5.013E+00,    7.502E+00,,     0.715
C,SE-75    ,NO ,   -9.332E-01,    2.594E+00,    4.169E+00,,    -0.224
C,SR-85    ,NO ,    1.972E+01,    2.601E+00,    5.122E+00,,     3.850
C,Y-88     ,NO ,   -1.870E+00,    2.368E+00,    3.642E+00,,    -0.513
C,NB-94    ,NO ,    1.556E-02,    1.781E+00,    2.961E+00,,     0.005
C,NB-95    ,NO ,    2.578E+00,    2.198E+00,    3.813E+00,,     0.676
C,ZR-95    ,NO ,   -3.124E+00,    3.819E+00,    6.071E+00,,    -0.515
C,MO-99    ,NO ,    7.958E+01,    1.061E+03,    1.762E+03,,     0.045
C,RU-103   ,NO ,    2.491E+00,    2.505E+00,    4.297E+00,,     0.580
C,RU-106   ,NO ,    3.518E+00,    1.768E+01,    2.911E+01,,     0.121
C,AG-110m  ,NO ,    1.073E-01,    1.889E+00,    3.079E+00,,     0.035
C,SN-113   ,NO ,   -9.175E-01,    2.572E+00,    4.162E+00,,    -0.220
C,SB-124   ,NO ,    4.247E-01,    4.857E+00,    3.593E+00,,     0.118
C,SB-125   ,NO ,   -7.271E-01,    5.248E+00,    8.501E+00,,    -0.086
C,TE-129M  ,NO ,    4.095E+01,    2.957E+01,    5.029E+01,,     0.814
C,I-131    ,NO ,   -9.647E+00,    7.764E+00,    1.224E+01,,    -0.788
C,BA-133   ,NO ,    4.276E+00,    2.778E+00,    4.169E+00,,     1.026
C,CS-134   ,NO ,    2.537E+00,    4.104E+00,    3.273E+00,,     0.775
C,CS-136   ,NO ,    1.791E+00,    4.311E+00,    7.227E+00,,     0.248
C,CS-137   ,NO ,    7.075E-02,    2.020E+00,    3.289E+00,,     0.022
C,CE-139   ,NO ,    4.390E-01,    1.762E+00,    2.953E+00,,     0.149
C,BA-140   ,NO ,    2.794E+00,    1.538E+01,    2.557E+01,,     0.109
C,LA-140   ,NO ,    2.372E+00,    5.754E+00,    9.803E+00,,     0.242
C,CE-141   ,NO ,    3.340E+00,    4.603E+00,    6.505E+00,,     0.513
C,CE-144   ,NO ,   -9.556E-01,    1.561E+01,    2.161E+01,,    -0.044
C,EU-152   ,NO ,   -4.209E+00,    6.232E+00,    9.052E+00,,    -0.465
C,EU-154   ,NO ,    2.810E-01,    3.465E+00,    5.653E+00,,     0.050
C,AC-228   ,NO ,    1.974E+00,    9.003E+00,    1.283E+01,,     0.154
C,TH-228   ,NO ,    2.992E+00,    3.871E+00,    6.105E+00,,     0.490
C,U-235    ,NO ,    2.338E+01,    1.444E+01,    2.101E+01,,     1.112
C,U-238    ,NO ,    1.157E+02,    1.984E+02,    3.386E+02,,     0.342
C,AM-241   ,NO ,    1.301E+01,    1.950E+01,    2.758E+01,,     0.472
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 09:33:35.20
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 12-JUN-2006 14:33:18.19

LIMS No., Customer Name, Client ID: L28845-3 WG DRESDEN

Sample ID : 13L28845-3
Sample Type : WG
Quantity : 3.10090E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 11:05:00.
Geometry : 133L082404
BKGFILE : 13BG060306MT
Real Time : 0 08:27:52.74
Live time : 0 08:27:44.16

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	8	63.32*	123	803	1.19	126.74	7.08E-01	4.02E-03	48.7	2.90E+00
2	8	65.89	272	1047	1.56	131.87	8.10E-01	8.93E-03	22.9	
3	3	77.24*	88	715	1.13	154.56	1.25E+00	2.88E-03	59.9	1.75E+00
4	5	84.77*	13	854	1.40	169.61	1.51E+00	4.25E-04	452.0	1.09E+00
5	5	87.15*	37	741	1.12	174.37	1.58E+00	1.22E-03	138.7	
6	1	139.83*	251	807	1.14	279.65	2.27E+00	8.22E-03	23.1	1.61E+00
7	1	185.71*	49	788	1.06	371.35	2.18E+00	1.60E-03	127.3	4.63E-01
8	1	198.25*	252	649	1.19	396.43	2.12E+00	8.26E-03	21.1	1.54E+00
9	1	238.65*	158	677	1.12	477.19	1.94E+00	5.18E-03	36.4	1.19E+00
10	1	294.98*	10	545	1.20	589.78	1.70E+00	3.42E-04	480.1	1.01E+00
11	1	351.71*	30	407	2.29	703.20	1.51E+00	9.74E-04	160.6	1.76E+00
12	1	595.86	123	280	1.41	1191.39	1.02E+00	4.03E-03	28.7	1.33E+00
13	1	609.17*	63	183	1.75	1218.01	1.01E+00	2.07E-03	56.3	1.85E+00
14	1	1714.01	44	41	3.97	3428.98	4.63E-01	1.44E-03	35.3	2.31E+00
15	1	1765.87	76	64	2.81	3532.82	4.55E-01	2.49E-03	26.7	2.16E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	49	3.28*	2.179E+00	1.950E+01	1.950E+01	254.60
TH-228	238.63	158	44.60*	1.938E+00	5.218E+00	5.309E+00	72.88
	240.98	------	3.95	1.927E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	2.278E+00	------	Line Not Found	------
	163.35	------	4.70	2.256E+00	------	Line Not Found	------
	185.71	49	54.00	2.179E+00	1.184E+00	1.184E+00	254.60
	205.31	------	4.70	2.093E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28845-3 Acquisition date : 12-JUN-2006 14:33:18

Total number of lines in spectrum	15	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	2	13.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.950E+01	1.950E+01	4.964E+01	254.60	
TH-228	1.91Y	1.02	5.218E+00	5.309E+00	3.869E+00	72.88	
U-235	7.04E+08Y	1.00	1.184E+00	1.184E+00	3.015E+00	254.60	K
	Total Activity :		2.590E+01	2.599E+01			
	Grand Total Activity :		2.590E+01	2.599E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 13L28845-3 Acquisition date : 12-JUN-2006 14:33:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
8	63.32	123	803	1.19	126.74	123	13	4.02E-03	97.5	7.08E-01	
8	65.89	272	1047	1.56	131.87	123	13	8.93E-03	45.7	8.10E-01	
3	77.24	88	715	1.13	154.56	140	19	2.88E-03	****	1.25E+00	
5	84.77	13	854	1.40	169.61	163	15	4.25E-04	****	1.51E+00	
5	87.15	37	741	1.12	174.37	163	15	1.22E-03	****	1.58E+00	
1	139.83	251	807	1.14	279.65	276	8	8.22E-03	46.3	2.27E+00	
1	198.25	252	649	1.19	396.43	392	8	8.26E-03	42.3	2.12E+00	
1	294.98	10	545	1.20	589.78	585	10	3.42E-04	****	1.70E+00	
1	351.71	30	407	2.29	703.20	698	11	9.74E-04	****	1.51E+00	
1	595.86	123	280	1.41	1191.39	1185	12	4.03E-03	57.4	1.02E+00	
1	609.17	63	183	1.75	1218.01	1214	10	2.07E-03	****	1.01E+00	
1	1714.01	44	41	3.97	3428.98	3421	15	1.44E-03	70.5	4.63E-01	
1	1765.87	76	64	2.81	3532.82	3523	17	2.49E-03	53.3	4.55E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	2	13.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.950E+01	1.950E+01	4.964E+01	254.60	
TH-228	1.91Y	1.02	5.218E+00	5.309E+00	3.869E+00	72.88	
	Total Activity :		2.472E+01	2.481E+01			

Grand Total Activity : 2.472E+01 2.481E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	1.950E+01	4.964E+01	6.294E+01	0.000E+00	0.310
TH-228	5.309E+00	3.869E+00	5.056E+00	0.000E+00	1.050

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	9.308E+00		1.722E+01	2.861E+01	0.000E+00	0.325
NA-24	-2.953E+02		1.983E+02	Half-Life too short		
K-40	-4.621E+00		2.934E+01	4.996E+01	0.000E+00	-0.092
CR-51	-1.308E+01		2.169E+01	3.471E+01	0.000E+00	-0.377
MN-54	1.768E+00		1.807E+00	3.094E+00	0.000E+00	0.571
CO-57	6.098E-01		1.592E+00	2.675E+00	0.000E+00	0.228
CO-58	-1.098E+00		2.017E+00	3.254E+00	0.000E+00	-0.337
FE-59	5.615E+00		4.330E+00	7.556E+00	0.000E+00	0.743
CO-60	3.015E-01		1.817E+00	3.030E+00	0.000E+00	0.100
ZN-65	1.949E+00		3.949E+00	6.642E+00	0.000E+00	0.293
SE-75	-1.126E+00		2.403E+00	3.919E+00	0.000E+00	-0.287
SR-85	1.892E+01		2.518E+00	4.800E+00	0.000E+00	3.941
Y-88	-4.950E-01		2.286E+00	3.686E+00	0.000E+00	-0.134
NB-94	-1.822E+00		1.767E+00	2.763E+00	0.000E+00	-0.659
NB-95	1.319E+00		1.990E+00	3.388E+00	0.000E+00	0.389
ZR-95	-1.039E+00		3.505E+00	5.751E+00	0.000E+00	-0.181
MO-99	6.379E+01		9.982E+02	1.665E+03	0.000E+00	0.038
RU-103	3.607E+00		2.374E+00	4.048E+00	0.000E+00	0.891
RU-106	-1.289E+01		1.635E+01	2.608E+01	0.000E+00	-0.494
AG-110m	1.536E+00		1.789E+00	3.023E+00	0.000E+00	0.508
SN-113	1.602E-01		2.392E+00	3.971E+00	0.000E+00	0.040
SB-124	-1.328E-01		4.619E+00	3.401E+00	0.000E+00	-0.039
SB-125	-8.124E-01		4.860E+00	7.957E+00	0.000E+00	-0.102
TE-129M	-1.086E+01		2.784E+01	4.501E+01	0.000E+00	-0.241
I-131	4.417E+00		7.321E+00	1.240E+01	0.000E+00	0.356
BA-133	1.395E+00		2.664E+00	3.867E+00	0.000E+00	0.361
CS-134	2.117E+00		2.900E+00	3.073E+00	0.000E+00	0.689
CS-136	-6.816E-01		3.937E+00	6.443E+00	0.000E+00	-0.106
CS-137	-1.247E+00		2.126E+00	3.119E+00	0.000E+00	-0.400
CE-139	-7.664E-01		1.707E+00	2.769E+00	0.000E+00	-0.277
BA-140	1.016E+01		1.494E+01	2.543E+01	0.000E+00	0.400
LA-140	-1.269E-01		5.177E+00	8.568E+00	0.000E+00	-0.015
CE-141	5.261E+00		4.278E+00	6.288E+00	0.000E+00	0.837
CE-144	-8.161E+00		1.395E+01	2.043E+01	0.000E+00	-0.399
EU-152	-1.105E+01		6.487E+00	8.273E+00	0.000E+00	-1.336
EU-154	1.962E+00		3.227E+00	5.442E+00	0.000E+00	0.360
AC-228	-1.004E+00		8.213E+00	1.158E+01	0.000E+00	-0.087
TH-232	-9.986E-01		8.167E+00	1.151E+01	0.000E+00	-0.087
U-235	-4.268E+00		1.492E+01	1.974E+01	0.000E+00	-0.216
U-238	1.963E+02		2.215E+02	3.428E+02	0.000E+00	0.573
AM-241	4.439E+00		1.479E+01	2.144E+01	0.000E+00	0.207

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A,13L28845-3      ,06/13/2006 09:33,05/26/2006 11:05,   3.101E+00,L28845-3 WG DR
B,13L28845-3      ,LIBD                ,08/05/2005 08:16,13 3L082404
C,RA-226   ,YES,   1.950E+01,   4.964E+01,   6.294E+01,,    0.310
C,TH-228   ,YES,   5.309E+00,   3.869E+00,   5.056E+00,,    1.050
C,BE-7     ,NO ,   9.308E+00,   1.722E+01,   2.861E+01,,    0.325
C,K-40     ,NO ,  -4.621E+00,   2.934E+01,   4.996E+01,,   -0.092
C,CR-51    ,NO ,  -1.308E+01,   2.169E+01,   3.471E+01,,   -0.377
C,MN-54    ,NO ,   1.768E+00,   1.807E+00,   3.094E+00,,    0.571
C,CO-57    ,NO ,   6.098E-01,   1.592E+00,   2.675E+00,,    0.228
C,CO-58    ,NO ,  -1.098E+00,   2.017E+00,   3.254E+00,,   -0.337
C,FE-59    ,NO ,   5.615E+00,   4.330E+00,   7.556E+00,,    0.743
C,CO-60    ,NO ,   3.015E-01,   1.817E+00,   3.030E+00,,    0.100
C,ZN-65    ,NO ,   1.949E+00,   3.949E+00,   6.642E+00,,    0.293
C,SE-75    ,NO ,  -1.126E+00,   2.403E+00,   3.919E+00,,   -0.287
C,SR-85    ,NO ,   1.892E+01,   2.518E+00,   4.800E+00,,    3.941
C,Y-88     ,NO ,  -4.950E-01,   2.286E+00,   3.686E+00,,   -0.134
C,NB-94    ,NO ,  -1.822E+00,   1.767E+00,   2.763E+00,,   -0.659
C,NB-95    ,NO ,   1.319E+00,   1.990E+00,   3.388E+00,,    0.389
C,ZR-95    ,NO ,  -1.039E+00,   3.505E+00,   5.751E+00,,   -0.181
C,MO-99    ,NO ,   6.379E+01,   9.982E+02,   1.665E+03,,    0.038
C,RU-103   ,NO ,   3.607E+00,   2.374E+00,   4.048E+00,,    0.891
C,RU-106   ,NO ,  -1.289E+01,   1.635E+01,   2.608E+01,,   -0.494
C,AG-110m  ,NO ,   1.536E+00,   1.789E+00,   3.023E+00,,    0.508
C,SN-113   ,NO ,   1.602E-01,   2.392E+00,   3.971E+00,,    0.040
C,SB-124   ,NO ,  -1.328E-01,   4.619E+00,   3.401E+00,,   -0.039
C,SB-125   ,NO ,  -8.124E-01,   4.860E+00,   7.957E+00,,   -0.102
C,TE-129M  ,NO ,  -1.086E+01,   2.784E+01,   4.501E+01,,   -0.241
C,I-131    ,NO ,   4.417E+00,   7.321E+00,   1.240E+01,,    0.356
C,BA-133   ,NO ,   1.395E+00,   2.664E+00,   3.867E+00,,    0.361
C,CS-134   ,NO ,   2.117E+00,   2.900E+00,   3.073E+00,,    0.689
C,CS-136   ,NO ,  -6.816E-01,   3.937E+00,   6.443E+00,,   -0.106
C,CS-137   ,NO ,  -1.247E+00,   2.126E+00,   3.119E+00,,   -0.400
C,CE-139   ,NO ,  -7.664E-01,   1.707E+00,   2.769E+00,,   -0.277
C,BA-140   ,NO ,   1.016E+01,   1.494E+01,   2.543E+01,,    0.400
C,LA-140   ,NO ,  -1.269E-01,   5.177E+00,   8.568E+00,,   -0.015
C,CE-141   ,NO ,   5.261E+00,   4.278E+00,   6.288E+00,,    0.837
C,CE-144   ,NO ,  -8.161E+00,   1.395E+01,   2.043E+01,,   -0.399
C,EU-152   ,NO ,  -1.105E+01,   6.487E+00,   8.273E+00,,   -1.336
C,EU-154   ,NO ,   1.962E+00,   3.227E+00,   5.442E+00,,    0.360
C,AC-228   ,NO ,  -1.004E+00,   8.213E+00,   1.158E+01,,   -0.087
C,TH-232   ,NO ,  -9.986E-01,   8.167E+00,   1.151E+01,,   -0.087
C,U-235    ,NO ,  -4.268E+00,   1.492E+01,   1.974E+01,,   -0.216
C,U-238    ,NO ,   1.963E+02,   2.215E+02,   3.428E+02,,    0.573
C,AM-241   ,NO ,   4.439E+00,   1.479E+01,   2.144E+01,,    0.207
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 18:13:21.85
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 12-JUN-2006 14:52:11.70

LIMS No., Customer Name, Client ID: L28845-4 WG DRESDEN

Sample ID	: 07L28845-4			Smple Date:	26-MAY-2006 14:00:00.
Sample Type	: WG			Geometry	: 073L082504
Quantity	: 3.06560E+00 L			BKGFILE	: 07BG060306MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 03:21:04.54
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 03:21:02.21
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	139.83*	85	369	2.38	280.34	2.36E+00	7.03E-03	45.7	3.72E+00
2	1	198.50*	96	269	1.74	397.76	2.24E+00	7.95E-03	36.1	1.48E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28845-4 Acquisition date : 12-JUN-2006 14:52:11

Total number of lines in spectrum	2	
Number of unidentified lines	2	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28845-4 Acquisition date : 12-JUN-2006 14:52:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	139.83	85	369	2.38	280.34	276	10	7.03E-03	91.4	2.36E+00	
1	198.50	96	269	1.74	397.76	392	10	7.95E-03	72.2	2.24E+00	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 2
Number of unidentified lines 2
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.111E-01		2.682E+01	4.369E+01	0.000E+00	0.005
NA-24	-6.512E+02		2.449E+02	Half-Life too short		
K-40	1.529E+01		3.601E+01	6.590E+01	0.000E+00	0.232
CR-51	-3.579E+01		3.324E+01	5.303E+01	0.000E+00	-0.675
MN-54	1.075E+00		2.721E+00	4.607E+00	0.000E+00	0.233
CO-57	-1.974E-01		2.616E+00	4.266E+00	0.000E+00	-0.046
CO-58	-6.543E-01		3.155E+00	5.158E+00	0.000E+00	-0.127
FE-59	9.526E-01		6.250E+00	1.047E+01	0.000E+00	0.091
CO-60	-1.779E-01		2.650E+00	4.301E+00	0.000E+00	-0.041
ZN-65	-1.002E+00		6.198E+00	1.014E+01	0.000E+00	-0.099
SE-75	-2.087E+00		3.822E+00	6.111E+00	0.000E+00	-0.341
SR-85	2.630E+01		3.941E+00	7.936E+00	0.000E+00	3.313
Y-88	-2.522E+00		3.062E+00	4.613E+00	0.000E+00	-0.547
NB-94	-2.975E+00		2.613E+00	3.968E+00	0.000E+00	-0.750
NB-95	-4.954E-02		3.061E+00	5.082E+00	0.000E+00	-0.010
ZR-95	-1.766E+00		5.662E+00	9.010E+00	0.000E+00	-0.196
MO-99	8.468E+02		1.462E+03	2.465E+03	0.000E+00	0.344
RU-103	3.102E+00		3.648E+00	6.176E+00	0.000E+00	0.502
RU-106	4.230E+01		2.551E+01	4.571E+01	0.000E+00	0.925
AG-110m	-1.235E+00		2.750E+00	4.388E+00	0.000E+00	-0.282
SN-113	1.410E+00		3.684E+00	6.172E+00	0.000E+00	0.228
SB-124	-9.174E+00		3.667E+00	5.321E+00	0.000E+00	-1.724
SB-125	-7.141E-01		7.615E+00	1.242E+01	0.000E+00	-0.057
TE-129M	5.043E+00		4.159E+01	6.828E+01	0.000E+00	0.074
I-131	-8.807E+00		1.102E+01	1.756E+01	0.000E+00	-0.501
BA-133	2.166E+00		3.705E+00	6.277E+00	0.000E+00	0.345

CS-134	1.530E+00	3.115E+00	5.243E+00	0.000E+00	0.292
CS-136	2.377E+00	6.137E+00	1.041E+01	0.000E+00	0.228
CS-137	1.918E+00	2.892E+00	4.920E+00	0.000E+00	0.390
CE-139	-1.353E+00	2.659E+00	4.369E+00	0.000E+00	-0.310
BA-140	1.752E+01	2.254E+01	3.892E+01	0.000E+00	0.450
LA-140	1.296E+00	7.334E+00	1.226E+01	0.000E+00	0.106
CE-141	5.778E+00	6.961E+00	9.979E+00	0.000E+00	0.579
CE-144	-1.893E+01	2.405E+01	3.210E+01	0.000E+00	-0.590
EU-152	-1.316E+01	8.567E+00	1.335E+01	0.000E+00	-0.986
EU-154	4.705E-01	5.270E+00	8.634E+00	0.000E+00	0.054
RA-226	1.847E+00	6.641E+01	1.105E+02	0.000E+00	0.017
AC-228	-2.485E+00	1.074E+01	1.720E+01	0.000E+00	-0.144
TH-228	2.483E+00	5.193E+00	8.695E+00	0.000E+00	0.286
TH-232	-2.471E+00	1.068E+01	1.710E+01	0.000E+00	-0.144
U-235	3.462E+01	2.253E+01	3.330E+01	0.000E+00	1.039
U-238	2.175E+01	2.815E+02	4.620E+02	0.000E+00	0.047
AM-241	-4.773E+01	2.514E+01	3.795E+01	0.000E+00	-1.258

A,07L28845-4 ,06/12/2006 18:13,05/26/2006 14:00, 3.066E+00,L28845-4 WG DR
B,07L28845-4 ,LIBD ,06/07/2006 09:32,073L082504

C,BE-7	,NO ,	2.111E-01,	2.682E+01,	4.369E+01,,	0.005
C,K-40	,NO ,	1.529E+01,	3.601E+01,	6.590E+01,,	0.232
C,CR-51	,NO ,	-3.579E+01,	3.324E+01,	5.303E+01,,	-0.675
C,MN-54	,NO ,	1.075E+00,	2.721E+00,	4.607E+00,,	0.233
C,CO-57	,NO ,	-1.974E-01,	2.616E+00,	4.266E+00,,	-0.046
C,CO-58	,NO ,	-6.543E-01,	3.155E+00,	5.158E+00,,	-0.127
C,FE-59	,NO ,	9.526E-01,	6.250E+00,	1.047E+01,,	0.091
C,CO-60	,NO ,	-1.779E-01,	2.650E+00,	4.301E+00,,	-0.041
C,ZN-65	,NO ,	-1.002E+00,	6.198E+00,	1.014E+01,,	-0.099
C,SE-75	,NO ,	-2.087E+00,	3.822E+00,	6.111E+00,,	-0.341
C,SR-85	,NO ,	2.630E+01,	3.941E+00,	7.936E+00,,	3.313
C,Y-88	,NO ,	-2.522E+00,	3.062E+00,	4.613E+00,,	-0.547
C,NB-94	,NO ,	-2.975E+00,	2.613E+00,	3.968E+00,,	-0.750
C,NB-95	,NO ,	-4.954E-02,	3.061E+00,	5.082E+00,,	-0.010
C,ZR-95	,NO ,	-1.766E+00,	5.662E+00,	9.010E+00,,	-0.196
C,MO-99	,NO ,	8.468E+02,	1.462E+03,	2.465E+03,,	0.344
C,RU-103	,NO ,	3.102E+00,	3.648E+00,	6.176E+00,,	0.502
C,RU-106	,NO ,	4.230E+01,	2.551E+01,	4.571E+01,,	0.925
C,AG-110m	,NO ,	-1.235E+00,	2.750E+00,	4.388E+00,,	-0.282
C,SN-113	,NO ,	1.410E+00,	3.684E+00,	6.172E+00,,	0.228
C,SB-124	,NO ,	-9.174E+00,	3.667E+00,	5.321E+00,,	-1.724
C,SB-125	,NO ,	-7.141E-01,	7.615E+00,	1.242E+01,,	-0.057
C,TE-129M	,NO ,	5.043E+00,	4.159E+01,	6.828E+01,,	0.074
C,I-131	,NO ,	-8.807E+00,	1.102E+01,	1.756E+01,,	-0.501
C,BA-133	,NO ,	2.166E+00,	3.705E+00,	6.277E+00,,	0.345
C,CS-134	,NO ,	1.530E+00,	3.115E+00,	5.243E+00,,	0.292
C,CS-136	,NO ,	2.377E+00,	6.137E+00,	1.041E+01,,	0.228
C,CS-137	,NO ,	1.918E+00,	2.892E+00,	4.920E+00,,	0.390
C,CE-139	,NO ,	-1.353E+00,	2.659E+00,	4.369E+00,,	-0.310
C,BA-140	,NO ,	1.752E+01,	2.254E+01,	3.892E+01,,	0.450
C,LA-140	,NO ,	1.296E+00,	7.334E+00,	1.226E+01,,	0.106
C,CE-141	,NO ,	5.778E+00,	6.961E+00,	9.979E+00,,	0.579
C,CE-144	,NO ,	-1.893E+01,	2.405E+01,	3.210E+01,,	-0.590
C,EU-152	,NO ,	-1.316E+01,	8.567E+00,	1.335E+01,,	-0.986
C,EU-154	,NO ,	4.705E-01,	5.270E+00,	8.634E+00,,	0.054
C,RA-226	,NO ,	1.847E+00,	6.641E+01,	1.105E+02,,	0.017
C,AC-228	,NO ,	-2.485E+00,	1.074E+01,	1.720E+01,,	-0.144
C,TH-228	,NO ,	2.483E+00,	5.193E+00,	8.695E+00,,	0.286
C,TH-232	,NO ,	-2.471E+00,	1.068E+01,	1.710E+01,,	-0.144
C,U-235	,NO ,	3.462E+01,	2.253E+01,	3.330E+01,,	1.039
C,U-238	,NO ,	2.175E+01,	2.815E+02,	4.620E+02,,	0.047
C,AM-241	,NO ,	-4.773E+01,	2.514E+01,	3.795E+01,,	-1.258

Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 23:01:34.11
TBE23 03017322 HpGe ********** Aquisition Date/Time: 12-JUN-2006 15:17:03.79

LIMS No., Customer Name, Client ID: WG L28845-5 DRESDEN

Sample ID : 23L28845-5
Sample Type : WG
Quantity : 3.05620E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 14:10:00.
Geometry : 233L082404
BKGFILE : 23BG060306MT
Real Time : 0 07:44:20.35
Live time : 0 07:44:00.98

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	8	33.79*	131	30	1.17	67.90	8.25E-02	4.71E-03	25.1	4.25E+00
2	8	35.94*	155	216	2.59	72.19	1.18E-01	5.56E-03	42.4	
3	8	38.96*	181	496	2.59	78.25	1.81E-01	6.51E-03	37.3	
4	8	41.68*	12	405	1.45	83.68	2.50E-01	4.22E-04	406.8	
5	8	46.55*	13	629	1.55	93.40	4.00E-01	4.66E-04	357.5	
6	4	63.24*	52	946	1.34	126.76	1.04E+00	1.86E-03	118.1	2.76E+00
7	4	66.08	255	787	1.49	132.44	1.15E+00	9.15E-03	19.5	
8	0	76.95	135	922	0.94	154.16	1.53E+00	4.84E-03	38.3	
9	0	92.35*	125	1472	1.13	184.93	1.93E+00	4.48E-03	67.1	
10	0	139.50*	138	1149	0.94	279.18	2.32E+00	4.97E-03	48.7	
11	0	185.18*	34	987	1.51	370.46	2.18E+00	1.22E-03	202.7	
12	0	198.37*	161	928	1.19	396.82	2.11E+00	5.79E-03	39.1	
13	0	238.02*	122	788	1.30	476.08	1.90E+00	4.38E-03	49.8	
14	0	295.33*	57	551	0.78	590.64	1.64E+00	2.03E-03	87.4	
15	0	351.61*	168	521	1.38	703.13	1.44E+00	6.02E-03	32.8	
16	0	582.18*	51	328	1.60	1164.06	9.72E-01	1.84E-03	88.1	
17	0	595.70	173	233	1.52	1191.09	9.56E-01	6.22E-03	20.7	
18	0	608.79*	286	288	1.65	1217.25	9.41E-01	1.03E-02	16.8	
19	0	851.67	47	66	1.42	1702.90	7.42E-01	1.71E-03	33.9	
20	0	911.10*	67	90	0.99	1821.73	7.08E-01	2.42E-03	38.1	
21	0	1120.57*	59	88	1.72	2240.66	6.15E-01	2.11E-03	40.8	
22	0	1764.76*	32	59	2.44	3529.42	4.38E-01	1.16E-03	70.9	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	34	3.28*	2.177E+00	1.515E+01	1.515E+01	405.46
AC-228	835.50	------	1.75	7.515E-01	------	Line Not Found	------
	911.07	67	27.70*	7.083E-01	1.090E+01	1.097E+01	76.22
TH-228	238.63	122	44.60*	1.903E+00	4.565E+00	4.644E+00	99.68
	240.98	------	3.95	1.888E+00	------	Line Not Found	------
TH-232	583.14	51	30.25	9.725E-01	5.539E+00	5.539E+00	176.12
	911.07	67	27.70*	7.083E-01	1.090E+01	1.090E+01	76.22
	969.11	------	16.60	6.793E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity Page : 2
Sample ID : 23L28845-5 Acquisition date : 12-JUN-2006 15:17:03

Total number of lines in spectrum	22	
Number of unidentified lines	18	
Number of lines tentatively identified by NID	4	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.515E+01	1.515E+01	6.143E+01	405.46	
AC-228	5.75Y	1.01	1.090E+01	1.097E+01	0.836E+01	76.22	
TH-228	1.91Y	1.02	4.565E+00	4.644E+00	4.629E+00	99.68	
TH-232	1.41E+10Y	1.00	1.090E+01	1.090E+01	0.831E+01	76.22	
	Total Activity :		4.152E+01	4.166E+01			
	Grand Total Activity :		4.152E+01	4.166E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28845-5 Acquisition date : 12-JUN-2006 15:17:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
8	33.79	131	30	1.17	67.90	64	34	4.71E-03	50.2	8.25E-02	
8	35.94	155	216	2.59	72.19	64	34	5.56E-03	84.9	1.18E-01	
8	38.96	181	496	2.59	78.25	64	34	6.51E-03	74.6	1.81E-01	
8	41.68	12	405	1.45	83.68	64	34	4.22E-04	****	2.50E-01	
8	46.55	13	629	1.55	93.40	64	34	4.66E-04	****	4.00E-01	
4	63.24	52	946	1.34	126.76	123	13	1.86E-03	****	1.04E+00	
4	66.08	255	787	1.49	132.44	123	13	9.15E-03	39.0	1.15E+00	
0	76.95	135	922	0.94	154.16	152	7	4.84E-03	76.7	1.53E+00	
0	92.35	125	1472	1.13	184.93	179	11	4.48E-03	****	1.93E+00	
0	139.50	138	1149	0.94	279.18	275	9	4.97E-03	97.5	2.32E+00	
0	198.37	161	928	1.19	396.82	391	10	5.79E-03	78.1	2.11E+00	
0	295.33	57	551	0.78	590.64	586	10	2.03E-03	****	1.64E+00	
0	351.61	168	521	1.38	703.13	696	14	6.02E-03	65.6	1.44E+00	
0	595.70	173	233	1.52	1191.09	1184	15	6.22E-03	41.3	9.56E-01	
0	608.79	286	288	1.65	1217.25	1208	18	1.03E-02	33.5	9.41E-01	
0	851.67	47	66	1.42	1702.90	1699	9	1.71E-03	67.9	7.42E-01	
0	1120.57	59	88	1.72	2240.66	2236	12	2.11E-03	81.7	6.15E-01	
0	1764.76	32	59	2.44	3529.42	3522	19	1.16E-03	****	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	22	
Number of unidentified lines	18	
Number of lines tentatively identified by NID	4	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	1.515E+01	1.515E+01	6.143E+01	405.46	
AC-228	5.75Y	1.01	5.365E+00	5.395E+00	12.89E+00	238.87	
TH-228	1.91Y	1.02	4.565E+00	4.644E+00	4.629E+00	99.68	
TH-232	1.41E+10Y	1.00	5.539E+00	5.539E+00	9.755E+00	176.12	
	Total Activity :		3.062E+01	3.073E+01			

Grand Total Activity : 3.062E+01 3.073E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	1.515E+01	6.143E+01	8.567E+01	0.000E+00	0.177
AC-228	5.395E+00	1.289E+01	1.216E+01	0.000E+00	0.444
TH-228	4.644E+00	4.629E+00	6.084E+00	0.000E+00	0.763
TH-232	5.539E+00	9.755E+00	1.313E+01	0.000E+00	0.422

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-7.825E+00		2.041E+01	3.381E+01	0.000E+00	-0.231
NA-24	-2.796E+02		2.007E+02	Half-Life too short		
K-40	-1.181E+01		3.140E+01	5.748E+01	0.000E+00	-0.205
CR-51	-8.831E+00		2.643E+01	4.431E+01	0.000E+00	-0.199
MN-54	-3.157E-01		2.011E+00	3.391E+00	0.000E+00	-0.093
CO-57	1.597E+00		2.212E+00	3.738E+00	0.000E+00	0.427
CO-58	-7.698E-01		2.304E+00	3.860E+00	0.000E+00	-0.199
FE-59	5.343E+00		4.471E+00	8.165E+00	0.000E+00	0.654
CO-60	4.332E-01		1.862E+00	3.258E+00	0.000E+00	0.133
ZN-65	7.734E+00		5.031E+00	8.072E+00	0.000E+00	0.958
SE-75	5.929E-01		2.977E+00	5.070E+00	0.000E+00	0.117
SR-85	1.814E+01		2.724E+00	5.282E+00	0.000E+00	3.434
Y-88	1.098E+00		2.172E+00	3.944E+00	0.000E+00	0.278
NB-94	-3.938E-02		1.906E+00	3.246E+00	0.000E+00	-0.012
NB-95	2.333E+00		2.241E+00	3.978E+00	0.000E+00	0.586
ZR-95	-2.329E-01		3.925E+00	6.678E+00	0.000E+00	-0.035
MO-99	-1.019E+02		1.071E+03	1.820E+03	0.000E+00	-0.056
RU-103	1.801E+00		2.734E+00	4.676E+00	0.000E+00	0.385
RU-106	2.987E+00		1.892E+01	3.176E+01	0.000E+00	0.094
AG-110m	-1.003E+00		2.002E+00	3.359E+00	0.000E+00	-0.299
SN-113	-1.714E+00		2.907E+00	4.814E+00	0.000E+00	-0.356
SB-124	4.574E+00		4.758E+00	4.026E+00	0.000E+00	1.136
SB-125	-8.946E-01		5.983E+00	1.001E+01	0.000E+00	-0.089
TE-129M	1.676E+01		3.214E+01	5.482E+01	0.000E+00	0.306
I-131	-3.836E+00		8.971E+00	1.496E+01	0.000E+00	-0.256
BA-133	5.560E+00		3.307E+00	5.021E+00	0.000E+00	1.107
CS-134	1.158E+01		4.577E+00	4.411E+00	0.000E+00	2.625
CS-136	1.968E+00		4.744E+00	8.202E+00	0.000E+00	0.240
CS-137	7.849E-01		2.166E+00	3.749E+00	0.000E+00	0.209
CE-139	-1.862E+00		2.344E+00	3.842E+00	0.000E+00	-0.485
BA-140	4.937E+00		1.787E+01	3.019E+01	0.000E+00	0.164
LA-140	5.019E+00		5.206E+00	9.656E+00	0.000E+00	0.520
CE-141	7.162E+00		6.133E+00	8.901E+00	0.000E+00	0.805
CE-144	-3.862E+00		1.994E+01	2.813E+01	0.000E+00	-0.137
EU-152	-1.230E+01		7.850E+00	1.055E+01	0.000E+00	-1.166
EU-154	3.088E+00		4.482E+00	7.568E+00	0.000E+00	0.408
U-235	1.415E+01		2.098E+01	2.880E+01	0.000E+00	0.491
U-238	-4.946E+01		2.332E+02	3.682E+02	0.000E+00	-0.134
AM-241	1.756E+01		1.369E+01	1.972E+01	0.000E+00	0.890

A,23L28845-5 ,06/12/2006 23:01,05/26/2006 14:10, 3.056E+00,WG L28845-5 DR
B,23L28845-5 ,LIBD ,06/01/2006 10:14,233L082404

C,RA-226	,YES,	1.515E+01,	6.143E+01,	8.567E+01,,	0.177
C,AC-228	,YES,	5.395E+00,	1.289E+01,	1.216E+01,,	0.444
C,TH-228	,YES,	4.644E+00,	4.629E+00,	6.084E+00,,	0.763
C,TH-232	,YES,	5.539E+00,	9.755E+00,	1.313E+01,,	0.422
C,BE-7	,NO ,	-7.825E+00,	2.041E+01,	3.381E+01,,	-0.231
C,K-40	,NO ,	-1.181E+01,	3.140E+01,	5.748E+01,,	-0.205
C,CR-51	,NO ,	-8.831E+00,	2.643E+01,	4.431E+01,,	-0.199
C,MN-54	,NO ,	-3.157E-01,	2.011E+00,	3.391E+00,,	-0.093
C,CO-57	,NO ,	1.597E+00,	2.212E+00,	3.738E+00,,	0.427
C,CO-58	,NO ,	-7.698E-01,	2.304E+00,	3.860E+00,,	-0.199
C,FE-59	,NO ,	5.343E+00,	4.471E+00,	8.165E+00,,	0.654
C,CO-60	,NO ,	4.332E-01,	1.862E+00,	3.258E+00,,	0.133
C,ZN-65	,NO ,	7.734E+00,	5.031E+00,	8.072E+00,,	0.958
C,SE-75	,NO ,	5.929E-01,	2.977E+00,	5.070E+00,,	0.117
C,SR-85	,NO ,	1.814E+01,	2.724E+00,	5.282E+00,,	3.434
C,Y-88	,NO ,	1.098E+00,	2.172E+00,	3.944E+00,,	0.278
C,NB-94	,NO ,	-3.938E-02,	1.906E+00,	3.246E+00,,	-0.012
C,NB-95	,NO ,	2.333E+00,	2.241E+00,	3.978E+00,,	0.586
C,ZR-95	,NO ,	-2.329E-01,	3.925E+00,	6.678E+00,,	-0.035
C,MO-99	,NO ,	-1.019E+02,	1.071E+03,	1.820E+03,,	-0.056
C,RU-103	,NO ,	1.801E+00,	2.734E+00,	4.676E+00,,	0.385
C,RU-106	,NO ,	2.987E+00,	1.892E+01,	3.176E+01,,	0.094
C,AG-110m	,NO ,	-1.003E+00,	2.002E+00,	3.359E+00,,	-0.299
C,SN-113	,NO ,	-1.714E+00,	2.907E+00,	4.814E+00,,	-0.356
C,SB-124	,NO ,	4.574E+00,	4.758E+00,	4.026E+00,,	1.136
C,SB-125	,NO ,	-8.946E-01,	5.983E+00,	1.001E+01,,	-0.089
C,TE-129M	,NO ,	1.676E+01,	3.214E+01,	5.482E+01,,	0.306
C,I-131	,NO ,	-3.836E+00,	8.971E+00,	1.496E+01,,	-0.256
C,BA-133	,NO ,	5.560E+00,	3.307E+00,	5.021E+00,,	1.107
C,CS-134	,NO ,	1.158E+01,	4.577E+00,	4.411E+00,,	2.625
C,CS-136	,NO ,	1.968E+00,	4.744E+00,	8.202E+00,,	0.240
C,CS-137	,NO ,	7.849E-01,	2.166E+00,	3.749E+00,,	0.209
C,CE-139	,NO ,	-1.862E+00,	2.344E+00,	3.842E+00,,	-0.485
C,BA-140	,NO ,	4.937E+00,	1.787E+01,	3.019E+01,,	0.164
C,LA-140	,NO ,	5.019E+00,	5.206E+00,	9.656E+00,,	0.520
C,CE-141	,NO ,	7.162E+00,	6.133E+00,	8.901E+00,,	0.805
C,CE-144	,NO ,	-3.862E+00,	1.994E+01,	2.813E+01,,	-0.137
C,EU-152	,NO ,	-1.230E+01,	7.850E+00,	1.055E+01,,	-1.166
C,EU-154	,NO ,	3.088E+00,	4.482E+00,	7.568E+00,,	0.408
C,U-235	,NO ,	1.415E+01,	2.098E+01,	2.880E+01,,	0.491
C,U-238	,NO ,	-4.946E+01,	2.332E+02,	3.682E+02,,	-0.134
C,AM-241	,NO ,	1.756E+01,	1.369E+01,	1.972E+01,,	0.890

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 13-JUN-2006 05:08:59.11
TBE23 03017322 HpGe ********** Aquisition Date/Time: 12-JUN-2006 23:08:27.63

LIMS No., Customer Name, Client ID: WG L28845-6 EX DRES

Sample ID	: 23L28845-6			Smple Date:	26-MAY-2006 15:35:00.
Sample Type	: WG			Geometry	: 233L082404
Quantity	: 3.10810E+00 L			BKGFILE	: 23BG060306MT
Start Channel	: 50	Energy Tol	: 1.50000	Real Time	: 0 06:00:14.90
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 06:00:00.00
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	9	33.57*	19	30	0.93	67.46	7.93E-02	8.57E-04	145.6	5.56E+00
2	9	34.80*	51	102	1.82	69.92	9.81E-02	2.37E-03	84.8	
3	9	36.72*	1	329	2.69	73.76	1.33E-01	3.34E-05	*****	
4	9	38.10*	71	340	1.95	76.52	1.61E-01	3.28E-03	67.5	
5	0	92.40*	86	781	1.15	185.05	1.93E+00	4.00E-03	66.9	
6	0	139.11*	28	795	1.18	278.38	2.32E+00	1.29E-03	190.5	
7	0	198.31*	88	526	1.19	396.71	2.11E+00	4.05E-03	51.5	
8	0	238.34*	172	530	1.24	476.72	1.90E+00	7.94E-03	29.5	
9	0	582.64*	49	170	1.20	1164.97	9.72E-01	2.29E-03	61.0	
10	0	595.38	61	165	0.91	1190.44	9.56E-01	2.81E-03	41.8	
11	0	608.68*	30	126	1.69	1217.04	9.41E-01	1.40E-03	88.9	
12	0	912.38*	58	132	5.58	1824.29	7.08E-01	2.70E-03	55.6	
13	0	968.86*	2	57	1.57	1937.25	6.79E-01	9.66E-05	858.0	
14	0	1461.02*	61	49	1.78	2921.68	5.10E-01	2.82E-03	42.5	
15	0	1764.29*	10	49	2.16	3528.48	4.38E-01	4.70E-04	197.9	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	61	10.67*	5.095E-01	4.513E+01	4.513E+01	85.09
AC-228	835.50	------	1.75	7.515E-01	------	Line Not Found	------
	911.07	58	27.70*	7.077E-01	1.198E+01	1.205E+01	111.30
TH-228	238.63	172	44.60*	1.901E+00	8.142E+00	8.284E+00	58.94
	240.98	------	3.95	1.888E+00	------	Line Not Found	------
TH-232	583.14	49	30.25	9.719E-01	6.761E+00	6.761E+00	121.91
	911.07	58	27.70*	7.077E-01	1.198E+01	1.198E+01	111.30
	969.11	2	16.60	6.794E-01	7.449E-01	7.449E-01	1716.06

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28845-6 Acquisition date : 12-JUN-2006 23:08:27

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.513E+01	4.513E+01	3.840E+01	85.09	
AC-228	5.75Y	1.01	1.198E+01	1.205E+01	1.342E+01	111.30	
TH-228	1.91Y	1.02	8.142E+00	8.284E+00	4.883E+00	58.94	
TH-232	1.41E+10Y	1.00	1.198E+01	1.198E+01	1.334E+01	111.30	
	Total Activity :		7.724E+01	7.745E+01			
	Grand Total Activity :		7.724E+01	7.745E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 23L28845-6 Acquisition date : 12-JUN-2006 23:08:27

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
9	33.57	19	30	0.93	67.46	64	27	8.57E-04	****	7.93E-02	
9	34.80	51	102	1.82	69.92	64	27	2.37E-03	****	9.81E-02	
9	36.72	1	329	2.69	73.76	64	27	3.34E-05	****	1.33E-01	
9	38.10	71	340	1.95	76.52	64	27	3.28E-03	****	1.61E-01	
0	92.40	86	781	1.15	185.05	181	8	4.00E-03	****	1.93E+00	
0	139.11	28	795	1.18	278.38	276	8	1.29E-03	****	2.32E+00	
0	198.31	88	526	1.19	396.71	393	8	4.05E-03	****	2.11E+00	
0	595.38	61	165	0.91	1190.44	1187	10	2.81E-03	83.6	9.56E-01	
0	608.68	30	126	1.69	1217.04	1212	9	1.40E-03	****	9.41E-01	
0	1764.29	10	49	2.16	3528.48	3520	21	4.70E-04	****	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.513E+01	4.513E+01	3.840E+01	85.09	
AC-228	5.75Y	1.01	6.990E+00	7.030E+00	15.12E+00	215.03	
TH-228	1.91Y	1.02	8.142E+00	8.284E+00	4.883E+00	58.94	
TH-232	1.41E+10Y	1.00	4.995E+00	4.995E+00	6.928E+00	138.71	
	Total Activity :		6.526E+01	6.544E+01			

Grand Total Activity : 6.526E+01 6.544E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.513E+01	3.840E+01	3.399E+01	0.000E+00	1.328
AC-228	7.030E+00	1.512E+01	1.169E+01	0.000E+00	0.601
TH-228	8.284E+00	4.883E+00	7.167E+00	0.000E+00	1.156

TH-232	4.995E+00	6.928E+00	1.394E+01	0.000E+00	0.358

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	9.129E+00		2.335E+01	3.987E+01	0.000E+00	0.229
NA-24	-8.464E+01		2.702E+02	Half-Life too short		
CR-51	-3.412E+00		2.885E+01	4.874E+01	0.000E+00	-0.070
MN-54	-1.170E+00		2.130E+00	3.538E+00	0.000E+00	-0.331
CO-57	7.921E-02		2.424E+00	4.062E+00	0.000E+00	0.020
CO-58	-1.196E+00		2.470E+00	4.122E+00	0.000E+00	-0.290
FE-59	3.699E-01		4.937E+00	8.621E+00	0.000E+00	0.043
CO-60	-4.632E-01		2.113E+00	3.613E+00	0.000E+00	-0.128
ZN-65	1.324E+00		4.534E+00	7.998E+00	0.000E+00	0.166
SE-75	-8.570E-02		3.341E+00	5.677E+00	0.000E+00	-0.015
SR-85	1.606E+01		3.004E+00	5.783E+00	0.000E+00	2.777
Y-88	-1.257E+00		2.375E+00	4.014E+00	0.000E+00	-0.313
NB-94	6.340E-01		2.098E+00	3.639E+00	0.000E+00	0.174
NB-95	1.229E+00		2.532E+00	4.427E+00	0.000E+00	0.278
ZR-95	-2.439E+00		4.306E+00	7.178E+00	0.000E+00	-0.340
MO-99	2.388E+02		1.234E+03	2.137E+03	0.000E+00	0.112
RU-103	4.936E-01		2.975E+00	5.036E+00	0.000E+00	0.098
RU-106	-5.125E+00		2.130E+01	3.624E+01	0.000E+00	-0.141
AG-110m	-5.599E-02		2.294E+00	3.931E+00	0.000E+00	-0.014
SN-113	4.005E-01		3.187E+00	5.406E+00	0.000E+00	0.074
SB-124	2.479E+00		5.594E+00	4.453E+00	0.000E+00	0.557
SB-125	-7.242E+00		6.573E+00	1.067E+01	0.000E+00	-0.679
TE-129M	1.078E+01		3.441E+01	5.870E+01	0.000E+00	0.184
I-131	-1.450E+00		1.027E+01	1.729E+01	0.000E+00	-0.084
BA-133	6.786E-01		3.132E+00	5.330E+00	0.000E+00	0.127
CS-134	5.645E+00		4.161E+00	4.285E+00	0.000E+00	1.317
CS-136	5.719E+00		5.348E+00	9.590E+00	0.000E+00	0.596
CS-137	2.510E+00		2.399E+00	4.293E+00	0.000E+00	0.585
CE-139	-6.201E-01		2.596E+00	4.302E+00	0.000E+00	-0.144
BA-140	-1.432E+01		1.946E+01	3.170E+01	0.000E+00	-0.452
LA-140	-2.373E+00		6.018E+00	1.032E+01	0.000E+00	-0.230
CE-141	3.897E+00		6.736E+00	9.688E+00	0.000E+00	0.402
CE-144	-1.090E+01		2.231E+01	3.126E+01	0.000E+00	-0.349
EU-152	-6.299E+00		7.266E+00	1.199E+01	0.000E+00	-0.525
EU-154	1.764E+00		4.941E+00	8.325E+00	0.000E+00	0.212
RA-226	-2.891E+01		6.580E+01	1.017E+02	0.000E+00	-0.284
U-235	1.788E+01		2.255E+01	3.154E+01	0.000E+00	0.567
U-238	-5.639E+01		2.584E+02	4.166E+02	0.000E+00	-0.135
AM-241	-1.638E+01		1.358E+01	2.180E+01	0.000E+00	-0.752

A,23L28845-6 ,06/13/2006 05:09,05/26/2006 15:35, 3.108E+00,WG L28845-6 EX
B,23L28845-6 ,LIBD ,06/01/2006 10:14,233L082404

C,K-40	,YES,	4.513E+01,	3.840E+01,	3.399E+01,,	1.328
C,AC-228	,YES,	7.030E+00,	1.512E+01,	1.169E+01,,	0.601
C,TH-228	,YES,	8.284E+00,	4.883E+00,	7.167E+00,,	1.156
C,TH-232	,YES,	4.995E+00,	6.928E+00,	1.394E+01,,	0.358
C,BE-7	,NO ,	9.129E+00,	2.335E+01,	3.987E+01,,	0.229
C,CR-51	,NO ,	-3.412E+00,	2.885E+01,	4.874E+01,,	-0.070
C,MN-54	,NO ,	-1.170E+00,	2.130E+00,	3.538E+00,,	-0.331
C,CO-57	,NO ,	7.921E-02,	2.424E+00,	4.062E+00,,	0.020
C,CO-58	,NO ,	-1.196E+00,	2.470E+00,	4.122E+00,,	-0.290
C,FE-59	,NO ,	3.699E-01,	4.937E+00,	8.621E+00,,	0.043
C,CO-60	,NO ,	-4.632E-01,	2.113E+00,	3.613E+00,,	-0.128
C,ZN-65	,NO ,	1.324E+00,	4.534E+00,	7.998E+00,,	0.166
C,SE-75	,NO ,	-8.570E-02,	3.341E+00,	5.677E+00,,	-0.015
C,SR-85	,NO ,	1.606E+01,	3.004E+00,	5.783E+00,,	2.777
C,Y-88	,NO ,	-1.257E+00,	2.375E+00,	4.014E+00,,	-0.313
C,NB-94	,NO ,	6.340E-01,	2.098E+00,	3.639E+00,,	0.174
C,NB-95	,NO ,	1.229E+00,	2.532E+00,	4.427E+00,,	0.278
C,ZR-95	,NO ,	-2.439E+00,	4.306E+00,	7.178E+00,,	-0.340
C,MO-99	,NO ,	2.388E+02,	1.234E+03,	2.137E+03,,	0.112
C,RU-103	,NO ,	4.936E-01,	2.975E+00,	5.036E+00,,	0.098
C,RU-106	,NO ,	-5.125E+00,	2.130E+01,	3.624E+01,,	-0.141
C,AG-110m	,NO ,	-5.599E-02,	2.294E+00,	3.931E+00,,	-0.014
C,SN-113	,NO ,	4.005E-01,	3.187E+00,	5.406E+00,,	0.074
C,SB-124	,NO ,	2.479E+00,	5.594E+00,	4.453E+00,,	0.557
C,SB-125	,NO ,	-7.242E+00,	6.573E+00,	1.067E+01,,	-0.679
C,TE-129M	,NO ,	1.078E+01,	3.441E+01,	5.870E+01,,	0.184
C,I-131	,NO ,	-1.450E+00,	1.027E+01,	1.729E+01,,	-0.084
C,BA-133	,NO ,	6.786E-01,	3.132E+00,	5.330E+00,,	0.127
C,CS-134	,NO ,	5.645E+00,	4.161E+00,	4.285E+00,,	1.317
C,CS-136	,NO ,	5.719E+00,	5.348E+00,	9.590E+00,,	0.596
C,CS-137	,NO ,	2.510E+00,	2.399E+00,	4.293E+00,,	0.585
C,CE-139	,NO ,	-6.201E-01,	2.596E+00,	4.302E+00,,	-0.144
C,BA-140	,NO ,	-1.432E+01,	1.946E+01,	3.170E+01,,	-0.452
C,LA-140	,NO ,	-2.373E+00,	6.018E+00,	1.032E+01,,	-0.230
C,CE-141	,NO ,	3.897E+00,	6.736E+00,	9.688E+00,,	0.402
C,CE-144	,NO ,	-1.090E+01,	2.231E+01,	3.126E+01,,	-0.349
C,EU-152	,NO ,	-6.299E+00,	7.266E+00,	1.199E+01,,	-0.525
C,EU-154	,NO ,	1.764E+00,	4.941E+00,	8.325E+00,,	0.212
C,RA-226	,NO ,	-2.891E+01,	6.580E+01,	1.017E+02,,	-0.284
C,U-235	,NO ,	1.788E+01,	2.255E+01,	3.154E+01,,	0.567
C,U-238	,NO ,	-5.639E+01,	2.584E+02,	4.166E+02,,	-0.135
C,AM-241	,NO ,	-1.638E+01,	1.358E+01,	2.180E+01,,	-0.752

Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 22:56:10.42
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 12-JUN-2006 18:20:47.50

LIMS No., Customer Name, Client ID: WG L28845-7 DRESDEN

Sample ID : 07L28845-7
Sample Type : WG
Quantity : 3.05840E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 17:00:00.
Geometry : 073L082504
BKGFILE : 07BG060306MT
Real Time : 0 04:35:14.64
Live time : 0 04:35:11.42

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.28*	148	542	1.24	133.13	8.04E-01	8.99E-03	30.9	3.19E+00
2	1	139.96*	104	401	1.32	280.61	2.36E+00	6.32E-03	37.6	1.61E+00
3	1	595.95	89	82	1.41	1193.07	1.10E+00	5.41E-03	19.8	2.45E+00
4	1	609.35*	170	146	2.21	1219.88	1.09E+00	1.03E-02	18.8	1.09E+00
5	1	1120.69*	41	43	2.13	2242.60	7.03E-01	2.51E-03	40.1	5.48E-01
6	1	1461.29*	51	25	2.69	2923.56	5.83E-01	3.07E-03	39.7	1.13E+00
7	1	1765.13*	41	21	2.89	3530.84	5.12E-01	2.50E-03	35.1	2.93E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	51	10.67*	5.826E-01	4.357E+01	4.357E+01	79.50

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28845-7 Acquisition date : 12-JUN-2006 18:20:47

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.357E+01	4.357E+01	3.464E+01	79.50	
	Total Activity :		4.357E+01	4.357E+01			
	Grand Total Activity :		4.357E+01	4.357E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28845-7 Acquisition date : 12-JUN-2006 18:20:47

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.28	148	542	1.24	133.13	129	9	8.99E-03	61.9	8.04E-01	
1	139.96	104	401	1.32	280.61	277	8	6.32E-03	75.2	2.36E+00	
1	595.95	89	82	1.41	1193.07	1190	7	5.41E-03	39.5	1.10E+00	
1	609.35	170	146	2.21	1219.88	1213	14	1.03E-02	37.6	1.09E+00	
1	1120.69	41	43	2.13	2242.60	2236	12	2.51E-03	80.3	7.03E-01	
1	1765.13	41	21	2.89	3530.84	3523	17	2.50E-03	70.2	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.357E+01	4.357E+01	3.464E+01	79.50	
	Total Activity :		4.357E+01	4.357E+01			
Grand Total Activity :			4.357E+01	4.357E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.357E+01	3.464E+01	3.911E+01	0.000E+00	1.114

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	4.800E+00		2.367E+01	3.888E+01	0.000E+00	0.123
NA-24	-5.118E+02		2.304E+02	Half-Life too short		
CR-51	-4.381E+01		2.824E+01	4.456E+01	0.000E+00	-0.983
MN-54	1.030E+00		2.284E+00	3.866E+00	0.000E+00	0.266
CO-57	-1.283E+00		2.344E+00	3.778E+00	0.000E+00	-0.340

CO-58	-1.429E+00	2.494E+00	3.995E+00	0.000E+00	-0.358
FE-59	2.398E+00	5.262E+00	8.966E+00	0.000E+00	0.267
CO-60	7.635E-01	2.280E+00	3.820E+00	0.000E+00	0.200
ZN-65	1.449E+01	5.909E+00	9.953E+00	0.000E+00	1.455
SE-75	1.148E+00	3.337E+00	5.507E+00	0.000E+00	0.209
SR-85	2.677E+01	3.366E+00	6.803E+00	0.000E+00	3.936
Y-88	1.166E+00	2.757E+00	4.727E+00	0.000E+00	0.247
NB-94	6.003E-01	2.283E+00	3.774E+00	0.000E+00	0.159
NB-95	5.396E-01	2.686E+00	4.508E+00	0.000E+00	0.120
ZR-95	6.590E-01	4.899E+00	8.013E+00	0.000E+00	0.082
MO-99	1.288E+01	1.314E+03	2.138E+03	0.000E+00	0.006
RU-103	1.962E+00	3.097E+00	5.167E+00	0.000E+00	0.380
RU-106	1.342E+01	2.291E+01	3.776E+01	0.000E+00	0.356
AG-110m	8.791E-01	2.356E+00	3.933E+00	0.000E+00	0.224
SN-113	-1.368E+00	3.200E+00	5.183E+00	0.000E+00	-0.264
SB-124	4.167E+00	5.884E+00	4.707E+00	0.000E+00	0.885
SB-125	-5.581E+00	6.397E+00	1.009E+01	0.000E+00	-0.553
TE-129M	-1.715E+01	3.692E+01	5.908E+01	0.000E+00	-0.290
I-131	-2.833E+00	9.807E+00	1.604E+01	0.000E+00	-0.177
BA-133	5.628E+00	3.295E+00	5.755E+00	0.000E+00	0.978
CS-134	5.253E+00	4.105E+00	4.794E+00	0.000E+00	1.096
CS-136	-3.597E+00	5.115E+00	8.114E+00	0.000E+00	-0.443
CS-137	8.960E-03	2.572E+00	4.214E+00	0.000E+00	0.002
CE-139	-1.005E+00	2.368E+00	3.909E+00	0.000E+00	-0.257
BA-140	2.674E+00	1.964E+01	3.279E+01	0.000E+00	0.082
LA-140	2.504E-01	6.290E+00	1.037E+01	0.000E+00	0.024
CE-141	-1.418E+00	6.416E+00	8.773E+00	0.000E+00	-0.162
CE-144	2.344E+00	2.147E+01	2.986E+01	0.000E+00	0.078
EU-152	-2.413E+01	7.544E+00	1.117E+01	0.000E+00	-2.160
EU-154	-1.485E+00	4.731E+00	7.668E+00	0.000E+00	-0.194
RA-226	-5.638E+01	5.868E+01	9.401E+01	0.000E+00	-0.600
AC-228	-2.111E+00	9.447E+00	1.482E+01	0.000E+00	-0.142
TH-228	2.412E+00	4.687E+00	7.713E+00	0.000E+00	0.313
TH-232	-2.099E+00	9.393E+00	1.474E+01	0.000E+00	-0.142
U-235	2.494E+00	2.075E+01	2.876E+01	0.000E+00	0.087
U-238	1.173E+02	2.513E+02	4.219E+02	0.000E+00	0.278
AM-241	-6.681E+00	2.414E+01	3.430E+01	0.000E+00	-0.195

A,07L28845-7 ,06/12/2006 22:56,05/26/2006 17:00, 3.058E+00,WG L28845-7 DR
B,07L28845-7 ,LIBD ,06/07/2006 09:32,073L082504

C,K-40	,YES,	4.357E+01,	3.464E+01,	3.911E+01,,	1.114
C,BE-7	,NO ,	4.800E+00,	2.367E+01,	3.888E+01,,	0.123
C,CR-51	,NO ,	-4.381E+01,	2.824E+01,	4.456E+01,,	-0.983
C,MN-54	,NO ,	1.030E+00,	2.284E+00,	3.866E+00,,	0.266
C,CO-57	,NO ,	-1.283E+00,	2.344E+00,	3.778E+00,,	-0.340
C,CO-58	,NO ,	-1.429E+00,	2.494E+00,	3.995E+00,,	-0.358
C,FE-59	,NO ,	2.398E+00,	5.262E+00,	8.966E+00,,	0.267
C,CO-60	,NO ,	7.635E-01,	2.280E+00,	3.820E+00,,	0.200
C,ZN-65	,NO ,	1.449E+01,	5.909E+00,	9.953E+00,,	1.455
C,SE-75	,NO ,	1.148E+00,	3.337E+00,	5.507E+00,,	0.209
C,SR-85	,NO ,	2.677E+01,	3.366E+00,	6.803E+00,,	3.936
C,Y-88	,NO ,	1.166E+00,	2.757E+00,	4.727E+00,,	0.247
C,NB-94	,NO ,	6.003E-01,	2.283E+00,	3.774E+00,,	0.159
C,NB-95	,NO ,	5.396E-01,	2.686E+00,	4.508E+00,,	0.120
C,ZR-95	,NO ,	6.590E-01,	4.899E+00,	8.013E+00,,	0.082
C,MO-99	,NO ,	1.288E+01,	1.314E+03,	2.138E+03,,	0.006
C,RU-103	,NO ,	1.962E+00,	3.097E+00,	5.167E+00,,	0.380
C,RU-106	,NO ,	1.342E+01,	2.291E+01,	3.776E+01,,	0.356
C,AG-110m	,NO ,	8.791E-01,	2.356E+00,	3.933E+00,,	0.224
C,SN-113	,NO ,	-1.368E+00,	3.200E+00,	5.183E+00,,	-0.264
C,SB-124	,NO ,	4.167E+00,	5.884E+00,	4.707E+00,,	0.885
C,SB-125	,NO ,	-5.581E+00,	6.397E+00,	1.009E+01,,	-0.553
C,TE-129M	,NO ,	-1.715E+01,	3.692E+01,	5.908E+01,,	-0.290
C,I-131	,NO ,	-2.833E+00,	9.807E+00,	1.604E+01,,	-0.177
C,BA-133	,NO ,	5.628E+00,	3.295E+00,	5.755E+00,,	0.978
C,CS-134	,NO ,	5.253E+00,	4.105E+00,	4.794E+00,,	1.096
C,CS-136	,NO ,	-3.597E+00,	5.115E+00,	8.114E+00,,	-0.443
C,CS-137	,NO ,	8.960E-03,	2.572E+00,	4.214E+00,,	0.002
C,CE-139	,NO ,	-1.005E+00,	2.368E+00,	3.909E+00,,	-0.257
C,BA-140	,NO ,	2.674E+00,	1.964E+01,	3.279E+01,,	0.082
C,LA-140	,NO ,	2.504E-01,	6.290E+00,	1.037E+01,,	0.024
C,CE-141	,NO ,	-1.418E+00,	6.416E+00,	8.773E+00,,	-0.162
C,CE-144	,NO ,	2.344E+00,	2.147E+01,	2.986E+01,,	0.078
C,EU-152	,NO ,	-2.413E+01,	7.544E+00,	1.117E+01,,	-2.160
C,EU-154	,NO ,	-1.485E+00,	4.731E+00,	7.668E+00,,	-0.194
C,RA-226	,NO ,	-5.638E+01,	5.868E+01,	9.401E+01,,	-0.600
C,AC-228	,NO ,	-2.111E+00,	9.447E+00,	1.482E+01,,	-0.142
C,TH-228	,NO ,	2.412E+00,	4.687E+00,	7.713E+00,,	0.313
C,TH-232	,NO ,	-2.099E+00,	9.393E+00,	1.474E+01,,	-0.142
C,U-235	,NO ,	2.494E+00,	2.075E+01,	2.876E+01,,	0.087
C,U-238	,NO ,	1.173E+02,	2.513E+02,	4.219E+02,,	0.278
C,AM-241	,NO ,	-6.681E+00,	2.414E+01,	3.430E+01,,	-0.195

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 22:59:13.25
TBE10 12892256 HpGe ********** Aquisition Date/Time: 12-JUN-2006 16:59:04.41

LIMS No., Customer Name, Client ID: WG L28845-8 DRESDEN

Sample ID : 10L28845-8
Sample Type : WG
Quantity : 3.12770E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 10:10:00.
Geometry : 103L083004
BKGFILE : 10BG060306MT
Real Time : 0 06:00:03.51
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.25*	184	680	1.56	131.61	7.25E-01	8.53E-03	27.8	1.70E+00
2	1	139.84	115	568	1.28	278.86	1.91E+00	5.32E-03	37.2	9.41E-01
3	1	185.98*	28	504	1.23	371.19	1.77E+00	1.28E-03	172.0	1.43E+00
4	1	198.27*	58	643	1.74	395.77	1.72E+00	2.69E-03	95.0	1.89E+00
5	1	583.51*	7	131	1.57	1166.67	7.98E-01	3.15E-04	376.9	8.96E-01
6	1	595.96	104	78	1.61	1191.60	7.86E-01	4.81E-03	17.6	1.07E+00
7	1	609.48*	58	120	2.47	1218.65	7.72E-01	2.68E-03	46.7	1.63E+00
8	1	1461.45*	1	32	2.00	2924.05	3.88E-01	4.79E-05	*****	1.04E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	1	10.67*	3.885E-01	9.989E-01	9.989E-01	3775.77
RA-226	186.21	28	3.28*	1.770E+00	1.911E+01	1.911E+01	343.96
U-235	143.76	------	10.50*	1.905E+00	------	Line Not Found	------
	163.35	------	4.70	1.860E+00	------	Line Not Found	------
	185.71	28	54.00	1.770E+00	1.161E+00	1.161E+00	343.96
	205.31	------	4.70	1.684E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28845-8 Acquisition date : 12-JUN-2006 16:59:04

Total number of lines in spectrum	8	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	3	37.50%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.989E-01	9.989E-01	377.2E-01	3775.77	
RA-226	1600.00Y	1.00	1.911E+01	1.911E+01	6.574E+01	343.96	
U-235	7.04E+08Y	1.00	1.161E+00	1.161E+00	3.993E+00	343.96	K
			---------	---------			
	Total Activity :		2.127E+01	2.127E+01			
	Grand Total Activity :		2.127E+01	2.127E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28845-8 Acquisition date : 12-JUN-2006 16:59:04

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.25	184	680	1.56	131.61	128	9	8.53E-03	55.6	7.25E-01	
1	139.84	115	568	1.28	278.86	275	8	5.32E-03	74.4	1.91E+00	
1	198.27	58	643	1.74	395.77	389	12	2.69E-03	****	1.72E+00	
1	583.51	7	131	1.57	1166.67	1162	11	3.15E-04	****	7.98E-01	T
1	595.96	104	78	1.61	1191.60	1188	8	4.81E-03	35.2	7.86E-01	
1	609.48	58	120	2.47	1218.65	1213	12	2.68E-03	93.4	7.72E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	3	37.50%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.989E-01	9.989E-01	377.2E-01	3775.77	
RA-226	1600.00Y	1.00	1.911E+01	1.911E+01	6.574E+01	343.96	
	Total Activity :		2.011E+01	2.011E+01			

Grand Total Activity : 2.011E+01 2.011E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	9.989E-01	3.772E+01	3.415E+01	0.000E+00	0.029
RA-226	1.911E+01	6.574E+01	9.702E+01	0.000E+00	0.197

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.398E-01		2.538E+01	4.212E+01	0.000E+00	0.006
NA-24	1.089E+02		3.346E+02	Half-Life too short		
CR-51	-1.404E+01		3.324E+01	5.399E+01	0.000E+00	-0.260

MN-54	-8.174E-02	2.450E+00	4.035E+00	0.000E+00	-0.020
CO-57	-6.312E-01	2.520E+00	4.147E+00	0.000E+00	-0.152
CO-58	4.773E-02	2.808E+00	4.645E+00	0.000E+00	0.010
FE-59	3.914E+00	5.864E+00	1.013E+01	0.000E+00	0.386
CO-60	1.459E+00	2.616E+00	4.464E+00	0.000E+00	0.327
ZN-65	3.325E+00	5.463E+00	9.388E+00	0.000E+00	0.354
SE-75	-3.284E+00	3.654E+00	5.908E+00	0.000E+00	-0.556
SR-85	2.063E+01	3.380E+00	6.587E+00	0.000E+00	3.131
Y-88	-1.222E-01	3.066E+00	5.003E+00	0.000E+00	-0.024
NB-94	-1.449E+00	2.521E+00	3.987E+00	0.000E+00	-0.363
NB-95	-1.913E+00	2.925E+00	4.691E+00	0.000E+00	-0.408
ZR-95	-1.514E+00	5.266E+00	8.613E+00	0.000E+00	-0.176
MO-99	-5.000E+02	1.500E+03	2.451E+03	0.000E+00	-0.204
RU-103	3.890E+00	3.302E+00	5.718E+00	0.000E+00	0.680
RU-106	8.957E+00	2.462E+01	3.994E+01	0.000E+00	0.224
AG-110m	-6.976E-01	2.398E+00	3.854E+00	0.000E+00	-0.181
SN-113	4.162E-01	3.536E+00	5.792E+00	0.000E+00	0.072
SB-124	5.759E+00	5.888E+00	4.915E+00	0.000E+00	1.172
SB-125	5.751E+00	7.189E+00	1.204E+01	0.000E+00	0.478
TE-129M	3.720E+01	4.081E+01	7.004E+01	0.000E+00	0.531
I-131	-1.594E+00	1.143E+01	1.860E+01	0.000E+00	-0.086
BA-133	1.968E+00	3.608E+00	6.014E+00	0.000E+00	0.327
CS-134	5.033E+00	4.154E+00	4.503E+00	0.000E+00	1.118
CS-136	-3.814E+00	5.794E+00	9.218E+00	0.000E+00	-0.414
CS-137	-2.530E+00	2.616E+00	4.052E+00	0.000E+00	-0.624
CE-139	6.109E-02	2.675E+00	4.384E+00	0.000E+00	0.014
BA-140	-9.575E+00	2.233E+01	3.615E+01	0.000E+00	-0.265
LA-140	8.747E-01	7.247E+00	1.210E+01	0.000E+00	0.072
CE-141	2.174E+00	6.946E+00	9.795E+00	0.000E+00	0.222
CE-144	-2.395E+00	2.309E+01	3.225E+01	0.000E+00	-0.074
EU-152	-6.877E+00	8.065E+00	1.287E+01	0.000E+00	-0.535
EU-154	-1.952E+00	5.143E+00	8.438E+00	0.000E+00	-0.231
AC-228	-1.138E+00	9.876E+00	1.516E+01	0.000E+00	-0.075
TH-228	1.801E+00	5.191E+00	8.323E+00	0.000E+00	0.216
TH-232	-1.132E+00	9.819E+00	1.508E+01	0.000E+00	-0.075
U-235	3.159E+01	2.225E+01	3.246E+01	0.000E+00	0.973
U-238	1.793E+02	2.562E+02	4.374E+02	0.000E+00	0.410
AM-241	-2.655E+01	2.431E+01	3.381E+01	0.000E+00	-0.785

A,10L28845-8 ,06/12/2006 22:59,05/26/2006 10:10, 3.128E+00,WG L28845-8 DR
B,10L28845-8 ,LIBD ,06/07/2006 09:32,103L083004

C,K-40	,YES,	9.989E-01,	3.772E+01,	3.415E+01,,		0.029
C,RA-226	,YES,	1.911E+01,	6.574E+01,	9.702E+01,,		0.197
C,BE-7	,NO ,	2.398E-01,	2.538E+01,	4.212E+01,,		0.006
C,CR-51	,NO ,	-1.404E+01,	3.324E+01,	5.399E+01,,		-0.260
C,MN-54	,NO ,	-8.174E-02,	2.450E+00,	4.035E+00,,		-0.020
C,CO-57	,NO ,	-6.312E-01,	2.520E+00,	4.147E+00,,		-0.152
C,CO-58	,NO ,	4.773E-02,	2.808E+00,	4.645E+00,,		0.010
C,FE-59	,NO ,	3.914E+00,	5.864E+00,	1.013E+01,,		0.386
C,CO-60	,NO ,	1.459E+00,	2.616E+00,	4.464E+00,,		0.327
C,ZN-65	,NO ,	3.325E+00,	5.463E+00,	9.388E+00,,		0.354
C,SE-75	,NO ,	-3.284E+00,	3.654E+00,	5.908E+00,,		-0.556
C,SR-85	,NO ,	2.063E+01,	3.380E+00,	6.587E+00,,		3.131
C,Y-88	,NO ,	-1.222E-01,	3.066E+00,	5.003E+00,,		-0.024
C,NB-94	,NO ,	-1.449E+00,	2.521E+00,	3.987E+00,,		-0.363
C,NB-95	,NO ,	-1.913E+00,	2.925E+00,	4.691E+00,,		-0.408
C,ZR-95	,NO ,	-1.514E+00,	5.266E+00,	8.613E+00,,		-0.176
C,MO-99	,NO ,	-5.000E+02,	1.500E+03,	2.451E+03,,		-0.204
C,RU-103	,NO ,	3.890E+00,	3.302E+00,	5.718E+00,,		0.680
C,RU-106	,NO ,	8.957E+00,	2.462E+01,	3.994E+01,,		0.224
C,AG-110m	,NO ,	-6.976E-01,	2.398E+00,	3.854E+00,,		-0.181
C,SN-113	,NO ,	4.162E-01,	3.536E+00,	5.792E+00,,		0.072
C,SB-124	,NO ,	5.759E+00,	5.888E+00,	4.915E+00,,		1.172
C,SB-125	,NO ,	5.751E+00,	7.189E+00,	1.204E+01,,		0.478
C,TE-129M	,NO ,	3.720E+01,	4.081E+01,	7.004E+01,,		0.531
C,I-131	,NO ,	-1.594E+00,	1.143E+01,	1.860E+01,,		-0.086
C,BA-133	,NO ,	1.968E+00,	3.608E+00,	6.014E+00,,		0.327
C,CS-134	,NO ,	5.033E+00,	4.154E+00,	4.503E+00,,		1.118
C,CS-136	,NO ,	-3.814E+00,	5.794E+00,	9.218E+00,,		-0.414
C,CS-137	,NO ,	-2.530E+00,	2.616E+00,	4.052E+00,,		-0.624
C,CE-139	,NO ,	6.109E-02,	2.675E+00,	4.384E+00,,		0.014
C,BA-140	,NO ,	-9.575E+00,	2.233E+01,	3.615E+01,,		-0.265
C,LA-140	,NO ,	8.747E-01,	7.247E+00,	1.210E+01,,		0.072
C,CE-141	,NO ,	2.174E+00,	6.946E+00,	9.795E+00,,		0.222
C,CE-144	,NO ,	-2.395E+00,	2.309E+01,	3.225E+01,,		-0.074
C,EU-152	,NO ,	-6.877E+00,	8.065E+00,	1.287E+01,,		-0.535
C,EU-154	,NO ,	-1.952E+00,	5.143E+00,	8.438E+00,,		-0.231
C,AC-228	,NO ,	-1.138E+00,	9.876E+00,	1.516E+01,,		-0.075
C,TH-228	,NO ,	1.801E+00,	5.191E+00,	8.323E+00,,		0.216
C,TH-232	,NO ,	-1.132E+00,	9.819E+00,	1.508E+01,,		-0.075
C,U-235	,NO ,	3.159E+01,	2.225E+01,	3.246E+01,,		0.973
C,U-238	,NO ,	1.793E+02,	2.562E+02,	4.374E+02,,		0.410
C,AM-241	,NO ,	-2.655E+01,	2.431E+01,	3.381E+01,,		-0.785

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 22:59:30.51
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 12-JUN-2006 16:59:09.36

LIMS No., Customer Name, Client ID: WG L28845-9 DRESDEN

Sample ID : 11L28845-9
Sample Type : WG
Quantity : 3.06400E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 10:20:00.
Geometry : 113L082304
BKGFILE : 11BG060306MT
Real Time : 0 06:00:07.51
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	140.02*	117	596	1.46	279.48	1.90E+00	5.41E-03	43.2	
2	0	162.46	71	476	1.44	324.47	1.88E+00	3.27E-03	55.1	
3	0	198.28	163	506	1.11	396.30	1.75E+00	7.55E-03	26.9	
4	0	238.57*	29	462	1.31	477.09	1.58E+00	1.36E-03	164.0	
5	0	351.85*	60	264	1.34	704.15	1.20E+00	2.79E-03	61.3	
6	0	595.85	91	156	0.94	1192.92	8.04E-01	4.23E-03	29.3	
7	0	1460.62*	77	51	2.46	2921.75	3.92E-01	3.55E-03	32.5	
8	0	1764.86	22	55	1.00	3528.69	3.39E-01	1.03E-03	87.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	77	10.67*	3.919E-01	7.495E+01	7.495E+01	64.95
TH-228	238.63	29	44.60*	1.577E+00	1.701E+00	1.731E+00	327.97
	240.98	------	3.95	1.567E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28845-9 Acquisition date : 12-JUN-2006 16:59:09

Total number of lines in spectrum	8	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	3	37.50%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.495E+01	7.495E+01	4.868E+01	64.95	
TH-228	1.91Y	1.02	1.701E+00	1.731E+00	5.676E+00	327.97	
	Total Activity :		7.665E+01	7.668E+01			
	Grand Total Activity :		7.665E+01	7.668E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28845-9 Acquisition date : 12-JUN-2006 16:59:09

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	140.02	117	596	1.46	279.48	274	10	5.41E-03	86.4	1.90E+00	
0	162.46	71	476	1.44	324.47	319	8	3.27E-03	****	1.88E+00	T
0	198.28	163	506	1.11	396.30	392	10	7.55E-03	53.8	1.75E+00	
0	351.85	60	264	1.34	704.15	699	11	2.79E-03	****	1.20E+00	
0	595.85	91	156	0.94	1192.92	1187	12	4.23E-03	58.5	8.04E-01	
0	1764.86	22	55	1.00	3528.69	3513	21	1.03E-03	****	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	3	37.50%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.495E+01	7.495E+01	4.868E+01	64.95	
TH-228	1.91Y	1.02	1.701E+00	1.731E+00	5.676E+00	327.97	
	Total Activity :		7.665E+01	7.668E+01			
	Grand Total Activity :		7.665E+01	7.668E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.495E+01	4.868E+01	3.938E+01	0.000E+00	1.903
TH-228	1.731E+00	5.676E+00	7.138E+00	0.000E+00	0.242

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	9.150E-02		2.589E+01	4.226E+01	0.000E+00	0.002
NA-24	-3.578E+02		3.235E+02	Half-Life too short		
CR-51	-4.667E+01		3.235E+01	5.115E+01	0.000E+00	-0.912

MN-54	-7.120E-01	2.555E+00	4.120E+00	0.000E+00	-0.173
CO-57	1.594E-01	2.473E+00	4.083E+00	0.000E+00	0.039
CO-58	-1.942E-01	2.817E+00	4.602E+00	0.000E+00	-0.042
FE-59	-1.436E+00	6.062E+00	9.888E+00	0.000E+00	-0.145
CO-60	5.949E-01	2.483E+00	4.148E+00	0.000E+00	0.143
ZN-65	1.478E+00	5.474E+00	9.205E+00	0.000E+00	0.161
SE-75	-1.456E+00	3.630E+00	5.975E+00	0.000E+00	-0.244
SR-85	1.489E+01	3.377E+00	6.263E+00	0.000E+00	2.378
Y-88	6.721E-01	3.110E+00	5.220E+00	0.000E+00	0.129
NB-94	-5.489E-01	2.395E+00	3.908E+00	0.000E+00	-0.140
NB-95	6.298E-01	2.928E+00	4.866E+00	0.000E+00	0.129
ZR-95	3.052E+00	5.007E+00	8.498E+00	0.000E+00	0.359
MO-99	1.993E+02	1.432E+03	2.375E+03	0.000E+00	0.084
RU-103	2.696E+00	3.477E+00	5.838E+00	0.000E+00	0.462
RU-106	-1.347E+01	2.306E+01	3.719E+01	0.000E+00	-0.362
AG-110m	-1.755E+00	2.455E+00	3.919E+00	0.000E+00	-0.448
SN-113	-9.141E-01	3.489E+00	5.679E+00	0.000E+00	-0.161
SB-124	-1.209E+01	4.023E+00	4.604E+00	0.000E+00	-2.626
SB-125	-2.024E+00	7.059E+00	1.144E+01	0.000E+00	-0.177
TE-129M	3.809E+00	3.821E+01	6.270E+01	0.000E+00	0.061
I-131	-7.581E+00	1.093E+01	1.756E+01	0.000E+00	-0.432
BA-133	6.781E+00	4.002E+00	6.044E+00	0.000E+00	1.122
CS-134	-7.060E-01	3.012E+00	4.282E+00	0.000E+00	-0.165
CS-136	-3.377E+00	6.015E+00	9.549E+00	0.000E+00	-0.354
CS-137	2.232E+00	2.603E+00	4.481E+00	0.000E+00	0.498
CE-139	1.527E+00	3.079E+00	4.345E+00	0.000E+00	0.351
BA-140	5.922E+00	2.155E+01	3.545E+01	0.000E+00	0.167
LA-140	3.950E+00	7.152E+00	1.239E+01	0.000E+00	0.319
CE-141	3.199E+00	6.886E+00	9.738E+00	0.000E+00	0.329
CE-144	-5.584E+00	2.284E+01	3.164E+01	0.000E+00	-0.176
EU-152	-8.320E+00	9.263E+00	1.236E+01	0.000E+00	-0.673
EU-154	2.128E+00	4.970E+00	8.269E+00	0.000E+00	0.257
RA-226	-5.827E+01	6.599E+01	9.922E+01	0.000E+00	-0.587
AC-228	-8.427E+00	1.113E+01	1.526E+01	0.000E+00	-0.552
TH-232	-8.378E+00	1.107E+01	1.517E+01	0.000E+00	-0.552
U-235	2.171E+01	2.222E+01	3.193E+01	0.000E+00	0.680
U-238	3.302E+01	2.648E+02	4.436E+02	0.000E+00	0.074
AM-241	-6.712E+01	3.291E+01	5.140E+01	0.000E+00	-1.306

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A,11L28845-9      ,06/12/2006 22:59,05/26/2006 10:20,   3.064E+00,WG L28845-9 DR
B,11L28845-9      ,LIBD                ,06/07/2006 09:40,113L082304
C,K-40     ,YES,   7.495E+01,   4.868E+01,   3.938E+01,,    1.903
C,TH-228   ,YES,   1.731E+00,   5.676E+00,   7.138E+00,,    0.242
C,BE-7     ,NO ,   9.150E-02,   2.589E+01,   4.226E+01,,    0.002
C,CR-51    ,NO ,  -4.667E+01,   3.235E+01,   5.115E+01,,   -0.912
C,MN-54    ,NO ,  -7.120E-01,   2.555E+00,   4.120E+00,,   -0.173
C,CO-57    ,NO ,   1.594E-01,   2.473E+00,   4.083E+00,,    0.039
C,CO-58    ,NO ,  -1.942E-01,   2.817E+00,   4.602E+00,,   -0.042
C,FE-59    ,NO ,  -1.436E+00,   6.062E+00,   9.888E+00,,   -0.145
C,CO-60    ,NO ,   5.949E-01,   2.483E+00,   4.148E+00,,    0.143
C,ZN-65    ,NO ,   1.478E+00,   5.474E+00,   9.205E+00,,    0.161
C,SE-75    ,NO ,  -1.456E+00,   3.630E+00,   5.975E+00,,   -0.244
C,SR-85    ,NO ,   1.489E+01,   3.377E+00,   6.263E+00,,    2.378
C,Y-88     ,NO ,   6.721E-01,   3.110E+00,   5.220E+00,,    0.129
C,NB-94    ,NO ,  -5.489E-01,   2.395E+00,   3.908E+00,,   -0.140
C,NB-95    ,NO ,   6.298E-01,   2.928E+00,   4.866E+00,,    0.129
C,ZR-95    ,NO ,   3.052E+00,   5.007E+00,   8.498E+00,,    0.359
C,MO-99    ,NO ,   1.993E+02,   1.432E+03,   2.375E+03,,    0.084
C,RU-103   ,NO ,   2.696E+00,   3.477E+00,   5.838E+00,,    0.462
C,RU-106   ,NO ,  -1.347E+01,   2.306E+01,   3.719E+01,,   -0.362
C,AG-110m  ,NO ,  -1.755E+00,   2.455E+00,   3.919E+00,,   -0.448
C,SN-113   ,NO ,  -9.141E-01,   3.489E+00,   5.679E+00,,   -0.161
C,SB-124   ,NO ,  -1.209E+01,   4.023E+00,   4.604E+00,,   -2.626
C,SB-125   ,NO ,  -2.024E+00,   7.059E+00,   1.144E+01,,   -0.177
C,TE-129M  ,NO ,   3.809E+00,   3.821E+01,   6.270E+01,,    0.061
C,I-131    ,NO ,  -7.581E+00,   1.093E+01,   1.756E+01,,   -0.432
C,BA-133   ,NO ,   6.781E+00,   4.002E+00,   6.044E+00,,    1.122
C,CS-134   ,NO ,  -7.060E-01,   3.012E+00,   4.282E+00,,   -0.165
C,CS-136   ,NO ,  -3.377E+00,   6.015E+00,   9.549E+00,,   -0.354
C,CS-137   ,NO ,   2.232E+00,   2.603E+00,   4.481E+00,,    0.498
C,CE-139   ,NO ,   1.527E+00,   3.079E+00,   4.345E+00,,    0.351
C,BA-140   ,NO ,   5.922E+00,   2.155E+01,   3.545E+01,,    0.167
C,LA-140   ,NO ,   3.950E+00,   7.152E+00,   1.239E+01,,    0.319
C,CE-141   ,NO ,   3.199E+00,   6.886E+00,   9.738E+00,,    0.329
C,CE-144   ,NO ,  -5.584E+00,   2.284E+01,   3.164E+01,,   -0.176
C,EU-152   ,NO ,  -8.320E+00,   9.263E+00,   1.236E+01,,   -0.673
C,EU-154   ,NO ,   2.128E+00,   4.970E+00,   8.269E+00,,    0.257
C,RA-226   ,NO ,  -5.827E+01,   6.599E+01,   9.922E+01,,   -0.587
C,AC-228   ,NO ,  -8.427E+00,   1.113E+01,   1.526E+01,,   -0.552
C,TH-232   ,NO ,  -8.378E+00,   1.107E+01,   1.517E+01,,   -0.552
C,U-235    ,NO ,   2.171E+01,   2.222E+01,   3.193E+01,,    0.680
C,U-238    ,NO ,   3.302E+01,   2.648E+02,   4.436E+02,,    0.074
C,AM-241   ,NO ,  -6.712E+01,   3.291E+01,   5.140E+01,,   -1.306
```

Sec. Review: Analyst: LIMS:

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 12-JUN-2006 15:12:36.55
TBE23 03017322 HpGe ********** Aquisition Date/Time: 12-JUN-2006 11:44:44.96

LIMS No., Customer Name, Client ID: WG L28845-10 EXELON/DRESDEN

Sample ID : 23L28845-10
Sample Type : WG
Quantity : 2.99220E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 12:00:00.
Geometry : 233L082404
BKGFILE : 23BG060306MT
Real Time : 0 03:27:40.16
Live time : 0 03:27:31.54

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	8	33.82*	59	29	1.27	67.96	8.29E-02	4.72E-03	32.6	2.88E+00
2	4	63.07*	39	299	1.31	126.42	1.03E+00	3.13E-03	80.0	1.07E+00
3	4	66.09	140	418	1.77	132.45	1.15E+00	1.12E-02	28.1	
4	0	92.31*	31	601	1.45	184.86	1.93E+00	2.51E-03	160.6	
5	0	139.74*	89	489	1.05	279.66	2.32E+00	7.11E-03	48.3	
6	0	185.50*	19	399	1.42	371.11	2.18E+00	1.49E-03	219.6	
7	0	238.25*	33	278	0.97	476.53	1.90E+00	2.62E-03	100.3	
8	0	595.81	37	75	1.44	1191.31	9.56E-01	3.00E-03	44.7	
9	0	609.13*	32	100	1.28	1217.94	9.40E-01	2.60E-03	75.0	
10	0	883.77	26	52	0.54	1767.09	7.23E-01	2.08E-03	63.9	
11	0	1460.63*	11	36	2.05	2920.90	5.10E-01	8.99E-04	172.8	
12	0	1764.67*	1	8	1.42	3529.25	4.38E-01	1.10E-04	628.2	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	11	10.67*	5.096E-01	1.493E+01	1.493E+01	345.55
RA-226	186.21	19	3.28*	2.175E+00	1.883E+01	1.883E+01	439.11
TH-228	238.63	33	44.60*	1.902E+00	2.787E+00	2.834E+00	200.67
	240.98	------	3.95	1.888E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28845-10 Acquisition date : 12-JUN-2006 11:44:44

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.493E+01	1.493E+01	5.161E+01	345.55	
RA-226	1600.00Y	1.00	1.883E+01	1.883E+01	8.269E+01	439.11	
TH-228	1.91Y	1.02	2.787E+00	2.834E+00	5.687E+00	200.67	
	Total Activity :		3.655E+01	3.660E+01			
	Grand Total Activity :		3.655E+01	3.660E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28845-10 Acquisition date : 12-JUN-2006 11:44:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
8	33.82	59	29	1.27	67.96	65	16	4.72E-03	65.1	8.29E-02	
4	63.07	39	299	1.31	126.42	123	14	3.13E-03	****	1.03E+00	
4	66.09	140	418	1.77	132.45	123	14	1.12E-02	56.2	1.15E+00	
0	92.31	31	601	1.45	184.86	181	10	2.51E-03	****	1.93E+00	
0	139.74	89	489	1.05	279.66	275	9	7.11E-03	96.6	2.32E+00	
0	595.81	37	75	1.44	1191.31	1186	9	3.00E-03	89.4	9.56E-01	
0	609.13	32	100	1.28	1217.94	1212	13	2.60E-03	****	9.40E-01	
0	883.77	26	52	0.54	1767.09	1758	15	2.08E-03	****	7.23E-01	T
0	1764.67	1	8	1.42	3529.25	3525	9	1.10E-04	****	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.493E+01	1.493E+01	5.161E+01	345.55	
RA-226	1600.00Y	1.00	1.883E+01	1.883E+01	8.269E+01	439.11	
TH-228	1.91Y	1.02	2.787E+00	2.834E+00	5.687E+00	200.67	
	Total Activity :		3.655E+01	3.660E+01			

Grand Total Activity : 3.655E+01 3.660E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.493E+01	5.161E+01	5.024E+01	0.000E+00	0.297
RA-226	1.883E+01	8.269E+01	1.286E+02	0.000E+00	0.146
TH-228	2.834E+00	5.687E+00	9.717E+00	0.000E+00	0.292

---- Non-Identified Nuclides ----

	Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided	(pCi/L)		
BE-7	2.233E+01	3.117E+01	5.481E+01	0.000E+00	0.407
NA-24	-3.897E+00	2.410E+02	Half-Life too short		
CR-51	-2.884E+01	3.937E+01	6.545E+01	0.000E+00	-0.441
MN-54	-8.305E-01	2.831E+00	4.812E+00	0.000E+00	-0.173
CO-57	1.029E+00	3.346E+00	5.667E+00	0.000E+00	0.182
CO-58	-1.084E+00	3.263E+00	5.534E+00	0.000E+00	-0.196
FE-59	4.888E+00	6.737E+00	1.250E+01	0.000E+00	0.391
CO-60	1.610E+00	2.848E+00	5.279E+00	0.000E+00	0.305
ZN-65	7.814E+00	6.481E+00	1.229E+01	0.000E+00	0.636
SE-75	-6.508E-01	4.593E+00	7.822E+00	0.000E+00	-0.083
SR-85	1.567E+01	4.032E+00	7.791E+00	0.000E+00	2.011
Y-88	1.453E+00	3.547E+00	6.619E+00	0.000E+00	0.220
NB-94	2.276E+00	2.851E+00	5.155E+00	0.000E+00	0.441
NB-95	4.758E+00	3.467E+00	6.473E+00	0.000E+00	0.735
ZR-95	-3.549E+00	5.920E+00	9.882E+00	0.000E+00	-0.359
MO-99	-7.634E+02	1.519E+03	2.556E+03	0.000E+00	-0.299
RU-103	1.081E-01	4.036E+00	6.864E+00	0.000E+00	0.016
RU-106	1.243E+01	2.822E+01	4.966E+01	0.000E+00	0.250
AG-110m	3.028E+00	2.923E+00	5.378E+00	0.000E+00	0.563
SN-113	-6.643E-01	4.125E+00	6.990E+00	0.000E+00	-0.095
SB-124	-9.000E+00	9.588E+00	5.755E+00	0.000E+00	-1.564
SB-125	2.187E+00	8.880E+00	1.528E+01	0.000E+00	0.143
TE-129M	-2.932E+01	4.804E+01	7.932E+01	0.000E+00	-0.370
I-131	6.506E+00	1.331E+01	2.314E+01	0.000E+00	0.281
BA-133	1.286E-01	4.368E+00	7.449E+00	0.000E+00	0.017
CS-134	1.554E+00	5.144E+00	5.849E+00	0.000E+00	0.266
CS-136	3.393E+00	6.511E+00	1.171E+01	0.000E+00	0.290
CS-137	3.232E-02	3.182E+00	5.531E+00	0.000E+00	0.006
CE-139	5.183E-01	3.552E+00	5.960E+00	0.000E+00	0.087
BA-140	1.380E+00	2.576E+01	4.394E+01	0.000E+00	0.031
LA-140	4.082E+00	7.842E+00	1.476E+01	0.000E+00	0.277
CE-141	5.550E+00	9.134E+00	1.327E+01	0.000E+00	0.418
CE-144	-2.394E+01	3.132E+01	4.347E+01	0.000E+00	-0.551
EU-152	-7.717E+00	1.014E+01	1.679E+01	0.000E+00	-0.459
EU-154	2.999E+00	6.769E+00	1.150E+01	0.000E+00	0.261
AC-228	1.172E+01	1.212E+01	2.097E+01	0.000E+00	0.559
TH-232	1.165E+01	1.206E+01	2.085E+01	0.000E+00	0.559
U-235	3.879E+01	3.021E+01	4.427E+01	0.000E+00	0.876
U-238	-1.362E+02	3.269E+02	5.377E+02	0.000E+00	-0.253
AM-241	1.230E+01	2.051E+01	2.949E+01	0.000E+00	0.417

A,23L28845-10 ,06/12/2006 15:12,05/26/2006 12:00, 2.992E+00,WG L28845-10 E
B,23L28845-10 ,LIBD ,06/01/2006 10:14,233L082404

C,K-40	,YES,	1.493E+01,	5.161E+01,	5.024E+01,,	0.297
C,RA-226	,YES,	1.883E+01,	8.269E+01,	1.286E+02,,	0.146
C,TH-228	,YES,	2.834E+00,	5.687E+00,	9.717E+00,,	0.292
C,BE-7	,NO ,	2.233E+01,	3.117E+01,	5.481E+01,,	0.407
C,CR-51	,NO ,	-2.884E+01,	3.937E+01,	6.545E+01,,	-0.441
C,MN-54	,NO ,	-8.305E-01,	2.831E+00,	4.812E+00,,	-0.173
C,CO-57	,NO ,	1.029E+00,	3.346E+00,	5.667E+00,,	0.182
C,CO-58	,NO ,	-1.084E+00,	3.263E+00,	5.534E+00,,	-0.196
C,FE-59	,NO ,	4.888E+00,	6.737E+00,	1.250E+01,,	0.391
C,CO-60	,NO ,	1.610E+00,	2.848E+00,	5.279E+00,,	0.305
C,ZN-65	,NO ,	7.814E+00,	6.481E+00,	1.229E+01,,	0.636
C,SE-75	,NO ,	-6.508E-01,	4.593E+00,	7.822E+00,,	-0.083
C,SR-85	,NO ,	1.567E+01,	4.032E+00,	7.791E+00,,	2.011
C,Y-88	,NO ,	1.453E+00,	3.547E+00,	6.619E+00,,	0.220
C,NB-94	,NO ,	2.276E+00,	2.851E+00,	5.155E+00,,	0.441
C,NB-95	,NO ,	4.758E+00,	3.467E+00,	6.473E+00,,	0.735
C,ZR-95	,NO ,	-3.549E+00,	5.920E+00,	9.882E+00,,	-0.359
C,MO-99	,NO ,	-7.634E+02,	1.519E+03,	2.556E+03,,	-0.299
C,RU-103	,NO ,	1.081E-01,	4.036E+00,	6.864E+00,,	0.016
C,RU-106	,NO ,	1.243E+01,	2.822E+01,	4.966E+01,,	0.250
C,AG-110m	,NO ,	3.028E+00,	2.923E+00,	5.378E+00,,	0.563
C,SN-113	,NO ,	-6.643E-01,	4.125E+00,	6.990E+00,,	-0.095
C,SB-124	,NO ,	-9.000E+00,	9.588E+00,	5.755E+00,,	-1.564
C,SB-125	,NO ,	2.187E+00,	8.880E+00,	1.528E+01,,	0.143
C,TE-129M	,NO ,	-2.932E+01,	4.804E+01,	7.932E+01,,	-0.370
C,I-131	,NO ,	6.506E+00,	1.331E+01,	2.314E+01,,	0.281
C,BA-133	,NO ,	1.286E-01,	4.368E+00,	7.449E+00,,	0.017
C,CS-134	,NO ,	1.554E+00,	5.144E+00,	5.849E+00,,	0.266
C,CS-136	,NO ,	3.393E+00,	6.511E+00,	1.171E+01,,	0.290
C,CS-137	,NO ,	3.232E-02,	3.182E+00,	5.531E+00,,	0.006
C,CE-139	,NO ,	5.183E-01,	3.552E+00,	5.960E+00,,	0.087
C,BA-140	,NO ,	1.380E+00,	2.576E+01,	4.394E+01,,	0.031
C,LA-140	,NO ,	4.082E+00,	7.842E+00,	1.476E+01,,	0.277
C,CE-141	,NO ,	5.550E+00,	9.134E+00,	1.327E+01,,	0.418
C,CE-144	,NO ,	-2.394E+01,	3.132E+01,	4.347E+01,,	-0.551
C,EU-152	,NO ,	-7.717E+00,	1.014E+01,	1.679E+01,,	-0.459
C,EU-154	,NO ,	2.999E+00,	6.769E+00,	1.150E+01,,	0.261
C,AC-228	,NO ,	1.172E+01,	1.212E+01,	2.097E+01,,	0.559
C,TH-232	,NO ,	1.165E+01,	1.206E+01,	2.085E+01,,	0.559
C,U-235	,NO ,	3.879E+01,	3.021E+01,	4.427E+01,,	0.876
C,U-238	,NO ,	-1.362E+02,	3.269E+02,	5.377E+02,,	-0.253
C,AM-241	,NO ,	1.230E+01,	2.051E+01,	2.949E+01,,	0.417

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company

2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29515

Exelon

August 14, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29515
EX001-3ESPDRES-06

08/14/2006 15:57

Sample Receipt

The following samples were received on August 9, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-122I-080806-GL-001	L29515-1	
WG-DN-MW-DN-122S-080806-GL-002	L29515-2	
WG-DN-MW-DN-121S-080806-GL-003	L29515-3	
WG-DN-MW-DN-123I-080806-GL-004	L29515-4	
RB-DN-MW-DN-120I-080806-GL-005	L29515-5	
WG-DN-MW-DN-120I-080806-GL-006	L29515-6	
WG-DN-MW-DN-120S-080806-GL-007	L29515-7	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3 (DIST)	TBE-2010	
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29515
EX001-3ESPDRES-06

08/14/2006 15:57

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4301.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-122I-080806-GL-001	L29515-1	WG4301-1

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4302.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-122I-080806-GL-001	L29515-1	WG4302-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29515
EX001-3ESPDRES-06

08/14/2006 15:57

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4309.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-122I-080806-GL-001	L29515-1	WG4309-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

L29515

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXCELON - DRESDEN FACILITY

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ **PRINTED NAME:** _____

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TRITIUM	GAMMA-SPEC	Sr 89/90	REMARKS
	8-8-06	0850	WG-D-MW-DN-122I-080806-GL-001	H_2O	2	X	X	X	
		1005	WG-D-MW-DN-122S-002		2	X	X	X	
		1205	WG-D-MW-DN-121S-003		2	X	X	X	
		1430	WG-D-MW-DN-123I-004		2	X	X	X	
		1440	RB-D-MW-DN-120I-080806-GL-005		2	X	X	X	
			WG-D-MW-DN-120I-080806-GL-006		2	X	X	X	
		1610	WG-D-MW-DN-120S-080806-GL-007		2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		14				

RELINQUISHED BY: ① [signature]	DATE: 8-8-06 TIME: 1645	RECEIVED BY: ② _____	DATE: TIME:
RELINQUISHED BY: ② _____	DATE: TIME:	RECEIVED BY: ③ _____	DATE: TIME:
RELINQUISHED BY: ③ _____	DATE: TIME:	RECEIVED BY: ④ _____	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 453291940 46

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: GREG LEWIS, RACHEL NACHETT

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 8/9/06 TIME: 1030

004826

1001-00(SOURCE)GN-CO004

L29515 6 of 70

DAYS INN
SUITES
Morris

EXCELON (DRESDEN FACILITY)

ATTN: REBECCA CHARLES

FROM: GREG LEWIS
CRA, INC.

* PLEASE CALL WEDNESDAY MORNING TO CORRECT A SMALL ISSUE WITH THE CHAIN OF CUSTODY
(513) 200-8902

2 PGS INCL. COVER

80 Hampton Road • Morris, Illinois 64045 • Phone: (815) 942-9000 • Fax: (815) 942-9000

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXCELON - DRESDEN FACILITY

SAMPLER'S SIGNATURE: _____ **PRINTED NAME:** _____

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TRITIUM	GAMMA-SPEC Cs 134/137		REMARKS
	8-8-06	0850	WG-D-MW-DN-122I-080806-GL-001	H_2O	2	X	X	X	
		1005	-1225- -002		2	X	X	X	
		1205	-1215- -003		2	X	X	X	
		1430	-123I- -004		2	X	X	X	
		1440	RB-D-MW-DN-120I-080806-GL-005		2	X	X	X	
		1650	WG-D-MW-DN-120I-080806-GL-006		2	X	X	X	
		1640	WG-D-MW-DN-1205-080806-GL-007		2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		14				

RELINQUISHED BY: ① _____	DATE: 8-8-06 TIME: 1645	RECEIVED BY: ② _____	DATE: TIME:
RELINQUISHED BY: ② _____	DATE: TIME:	RECEIVED BY: ③ _____	DATE: TIME:
RELINQUISHED BY: ③ _____	DATE: TIME:	RECEIVED BY: ④ _____	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 453291944046

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: GREG LEWIS, RACHEL NACHETT

RECEIVED FOR LABORATORY BY: _____ DATE: _____ TIME: _____

004826

1001-00(SOURCE)GN-CO004

002/002
08/14/2017 20:08 FAX
L29515 8 of 70

L29515

002/002

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXELON - DRESDEN FACILITY

SAMPLER'S SIGNATURE: _____ **PRINTED NAME:** _____

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TRITIUM	GAMMA - SPEC & 89/90		REMARKS
	8-8-06	0850	WG-DN-MW-DN-1225-080806-GL-001	H_2O	2	X	X	X	
		1005	-1225- -002		2	X	X	X	
		1205	-1215- -003		2	X	X	X	
		1430	-123I- -004		2	X	X	X	
		1440	RB-DN-MW-DN-120I-080806-GL-005		2	X	X	X	
		1650	WG-DN-MW-DN-120I-080806-GL-006		2	X	X	X	
		1610	WG-DN-MW-DN-1205-080806-GL-007		2	X	X	X	

D changed to DN
LCW 8/9/06

TOTAL NUMBER OF CONTAINERS 14

RELINQUISHED BY: (1) [signature]	DATE: 8-8-06 TIME: 1645	RECEIVED BY: (2) _____	DATE: TIME:
RELINQUISHED BY: (2) _____	DATE: TIME:	RECEIVED BY: (3) _____	DATE: TIME:
RELINQUISHED BY: (3) _____	DATE: TIME:	RECEIVED BY: (4) _____	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 453291940 46

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: GREG LEWIS, RACHEL NACHETT

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 8/9/06 TIME: 1030

004826

1001-00(SOURCE)GN-CO004

08/14/2017 20:09 FAX

L29515 9 of 70

Charles, Rebecca

From: Shaw, Kathy [kshaw@craworld.com]
Sent: Wednesday, August 09, 2006 10:54 AM
To: Charles, Rebecca
Cc: Hoyt, Dennis; Larry.Walton@exeloncorp.com
Subject: Dresden

Hi Rebecca,

Attached please find a revised copy of the Dresden COC for samples collected yesterday. I changed the D in the sample IDs to DN. Please update your records.

Thanks,

Kathy Shaw - Chemist

Conestoga-Rovers & Associates
45 Farmington Valley Drive
Plainville, Connecticut 06062
PH 860 747-1800
Fax 860 747-1900
CRAWORLD.COM

Charles, Rebecca

From: Larry.Walton@exeloncorp.com
Sent: Wednesday, August 09, 2006 11:39 AM
To: Charles, Rebecca; Wayne.Stotts@exeloncorp.com
Cc: kshaw@craworld.com
Subject: RE: TAT for Dresden

3 day TAT

Larry

-----Original Message-----
From: Charles, Rebecca [mailto:Rebecca.Charles@tbe.com]
Sent: Wednesday, August 09, 2006 11:38 AM
To: Stotts, Wayne A.
Cc: Walton, Larry; Shaw, Kathy
Subject: TAT for Dresden

Wayne

We received the samples from Dresden today. What turn-around time do you want for them?

Thanks

Rebecca Charles
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

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08/09/06 10:44

SR #: SR09823

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Client: Exelon

Project #: EX001-3ESPDRES-06

LIMS #: L29515

Initiated By: PMARSHALL
Init Date: 08/09/06 Receive Date: 08/09/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes	No	NA	Comment
1	Shipping container custody seals present and intact.			NA	
2	Sample container custody seals present and intact.			NA	
3	Sample containers received in good condition	Y			
4	Chain of custody received with samples	Y			
5	All samples listed on chain of custody received	Y			
6	Sample container labels present and legible.	Y			
7	Information on container labels correspond with chain of custody	Y			
8	Sample(s) properly preserved and in appropriate container(s)		N		Gamma portion of all seven samples required 5mL of nitric to be added to bring pH to 2.
9	Other (Describe)			NA	

Internal Chain of Custody

****
Sample # L29515-1 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-1 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-2 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-2 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-3 Containernum 1

Prod	Analyst

****
Sample # L29515-3 Containernum 1

H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-3 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-4 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-4 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-5 Containernum 1

Prod	Analyst

****
Sample # L29515-5 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-5 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-6 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-6 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****
Sample # L29515-7 Containernum 1

Prod	Analyst

****

Sample # L29515-7 Containernum 1

H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29515-7 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/09/2006 00:00			099999	Sample Custodian
08/09/2006 12:33	099999	Sample Custodian	030854	Donna Webb
08/09/2006 12:34	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:04	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:05	030854	Donna Webb	099999	Sample Custodian

08/14/06 Teledyne Brown Engineering Page 1 of 2

Internal Chain of Custody
Supplemental Sheet

L29515

****

L29515-1 WG WG-DN-MW-DN-122I-080806-GL-001

Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/10/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-2 WG WG-DN-MW-DN-122S-080806-GL-002

Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/10/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-3 WG WG-DN-MW-DN-121S-080806-GL-003

Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/10/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-4 WG WG-DN-MW-DN-123I-080806-GL-004

Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/10/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-5 WG RB-DN-MW-DN-120I-080806-GL-005

Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06

08/14/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29515

L29515-5	**WG**	**RB-DN-MW-DN-120I-080806-GL-005**	
Count Room	H-3 (DIST)	KOJ	08/10/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-6	**WG**	**WG-DN-MW-DN-120I-080806-GL-006**	
Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/11/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

****

L29515-7	**WG**	**WG-DN-MW-DN-120S-080806-GL-007**	
Process step	Prod	Analyst	Date
Login		RCHARLES	08/09/06
Aliquot	GELI	DW	08/09/06
Aliquot	H-3 (DIST)	DW	08/10/06
Aliquot	SR-90 (FAST)	LCB	08/10/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/11/06
Count Room	SR-90 (FAST)	KOJ	08/14/06

L29515

In Process

Sample#	Analysis	Matrix	Clientid

In Process QC

Sample #	Analysis	Matrix	Clientid

Missing gamma nuclides

Sample #	Nuclide

Spec/High Flags

Sample#	Analysis	Flag

QC Failures

Qc Sample	Analysis	QC type	Passfail

Recoveries

Sample#	Analysis	Flag

Comments

Sample#	Analysis	Seq	Comments

Analytical Results Summary

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-122I-080806-GL-001** Collect Start: 08/08/2006 08:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values	
H-3 (DIST)	2010	-5.89E+01	1.05E+02	**1.79E+02**	pCi/L		10	ml		08/10/06	60	M	U	
TOTAL SR	2018	-5.73E-01	6.58E-01	**1.46E+00**	pCi/L		450	ml	08/08/06 08:50	08/14/06	120	M	U	
K-40	2007	**1.04E+02**	4.83E+01	4.06E+01	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	+	Yes
MN-54	2007	-4.71E-01	2.40E+00	**3.87E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
CO-58	2007	-1.72E+00	2.37E+00	**3.56E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
FE-59	2007	3.32E+00	5.04E+00	**8.90E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
CO-60	2007	-1.21E+00	3.34E+00	**5.75E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
ZN-65	2007	-6.75E+00	6.60E+00	**9.18E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
NB-95	2007	9.27E-02	2.51E+00	**4.20E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
ZR-95	2007	2.78E+00	4.02E+00	**7.26E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
CS-134	2007	1.05E+00	2.33E+00	**3.54E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
CS-137	2007	-2.19E+00	2.87E+00	**4.15E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
BA-140	2007	-9.90E-01	9.69E+00	**1.56E+01**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No
LA-140	2007	-4.39E-01	3.40E+00	**5.42E+00**	pCi/L		3206.32	ml	08/08/06 08:50	08/10/06	8238	Sec	U	No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-122S-080806-GL-002** Collect Start: 08/08/2006 10:05 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-5.93E+01	1.06E+02	**1.81E+02**	pCi/L		10	ml		08/10/06	60	M	U		
TOTAL SR	2018	5.47E-01	7.50E-01	**1.43E+00**	pCi/L		450	ml	08/08/06 10:05	08/14/06	120	M	U		
MN-54	2007	8.99E-01	3.58E+00	**5.97E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
CO-58	2007	-3.47E+00	3.69E+00	**5.68E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
FE-59	2007	5.41E+00	6.81E+00	**1.19E+01**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
CO-60	2007	-6.61E-01	4.06E+00	**6.92E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
ZN-65	2007	4.00E+01	1.01E+01	**1.90E+01**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U*		No
NB-95	2007	1.62E+01	4.76E+00	**8.37E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U*		No
ZR-95	2007	-6.17E+00	6.16E+00	**9.50E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
CS-134	2007	1.04E+01	4.68E+00	**7.47E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U*		No
CS-137	2007	1.10E+00	4.33E+00	**6.09E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
BA-140	2007	-6.21E+00	1.37E+01	**2.20E+01**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
LA-140	2007	-1.37E-01	4.48E+00	**7.31E+00**	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	U		No
TH-228	2007	**1.27E+01**	7.22E+00	1.07E+01	pCi/L		3327.53	ml	08/08/06 10:05	08/10/06	11239	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

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No = Peak not identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-121S-080806-GL-003** Collect Start: 08/08/2006 12:05 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	7.54E+01	1.16E+02	**1.82E+02**	pCi/L		10	ml		08/10/06	60	M	U		
TOTAL SR	2018	6.04E-01	5.19E-01	**9.53E-01**	pCi/L		450	ml	08/08/06 12:05	08/14/06	120	M	U		
MN-54	2007	-3.43E+00	2.73E+00	**3.98E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
CO-58	2007	-2.50E+00	2.60E+00	**3.90E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
FE-59	2007	-2.06E+00	4.98E+00	**7.97E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
CO-60	2007	4.81E-01	2.67E+00	**4.44E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
ZN-65	2007	4.27E+00	6.24E+00	**9.63E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
NB-95	2007	8.56E+00	3.22E+00	**5.61E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U*		No
ZR-95	2007	-4.19E-01	4.16E+00	**6.74E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
CS-134	2007	4.51E-01	2.92E+00	**3.75E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
CS-137	2007	-3.12E+00	2.88E+00	**4.41E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
BA-140	2007	-1.81E-01	9.62E+00	**1.61E+01**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
LA-140	2007	-3.49E-01	3.28E+00	**5.41E+00**	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	U		No
TH-228	2007	**1.83E+01**	7.47E+00	7.71E+00	pCi/L		3330.13	ml	08/08/06 12:05	08/10/06	10800	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-123I-080806-GL-004** Collect Start: 08/08/2006 14:30 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-2.71E+01	1.11E+02	**1.86E+02**	pCi/L		10	ml		08/10/06	60	M	U		
TOTAL SR	2018	-8.99E-01	6.00E-01	**1.41E+00**	pCi/L		450	ml	08/08/06 14:30	08/14/06	120	M	U		
MN-54	2007	2.45E+00	2.92E+00	**5.59E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
CO-58	2007	2.12E+00	2.98E+00	**5.63E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
FE-59	2007	3.40E+00	6.33E+00	**1.20E+01**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
CO-60	2007	6.82E-01	3.15E+00	**5.90E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
ZN-65	2007	-3.03E+00	7.37E+00	**1.07E+01**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
NB-95	2007	3.56E+00	3.93E+00	**6.53E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
ZR-95	2007	-1.63E+00	5.35E+00	**9.16E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
CS-134	2007	-3.80E-01	3.23E+00	**4.85E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
CS-137	2007	-2.21E+00	3.15E+00	**5.22E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
BA-140	2007	-9.12E+00	1.12E+01	**1.86E+01**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No
LA-140	2007	7.57E-02	3.95E+00	**7.21E+00**	pCi/L		3206.17	ml	08/08/06 14:30	08/10/06	7200	Sec	U		No

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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **RB-DN-MW-DN-120I-080806-GL-005** Collect Start: 08/08/2006 14:40 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-5.69E+01	1.05E+02	**1.80E+02**	pCi/L		10	ml		08/10/06	60	M	U		
TOTAL SR	2018	2.07E-02	4.36E-01	**8.86E-01**	pCi/L		450	ml	08/08/06 14:40	08/14/06	120	M	U		
MN-54	2007	2.27E+00	2.53E+00	**4.49E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
CO-58	2007	-9.85E-01	2.50E+00	**3.88E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
FE-59	2007	3.42E+00	4.91E+00	**8.77E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
CO-60	2007	2.32E+00	2.82E+00	**5.09E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
ZN-65	2007	-4.25E-01	6.43E+00	**9.05E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
NB-95	2007	1.49E-02	2.41E+00	**3.93E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
ZR-95	2007	8.90E-01	4.13E+00	**6.91E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
CS-134	2007	-1.35E+00	2.58E+00	**3.46E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
CS-137	2007	2.60E+00	2.73E+00	**4.89E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
BA-140	2007	3.91E+00	9.35E+00	**1.62E+01**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No
LA-140	2007	-3.85E-02	3.11E+00	**5.18E+00**	pCi/L		3257.43	ml	08/08/06 14:40	08/10/06	8174	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-120I-080806-GL-006** Collect Start: 08/08/2006 16:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-6

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	1.11E+01	1.11E+02	**1.82E+02**	pCi/L		10	ml		08/11/06	60	M	U		
TOTAL SR	2018	2.38E-01	4.80E-01	**9.38E-01**	pCi/L		450	ml	08/08/06 16:50	08/14/06	120	M	U		
K-40	2007	**1.03E+02**	5.02E+01	3.58E+01	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	+		Yes
MN-54	2007	-8.89E-01	2.40E+00	**4.21E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
CO-58	2007	1.35E+00	2.33E+00	**4.50E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
FE-59	2007	-1.49E+00	4.46E+00	**7.80E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
CO-60	2007	7.94E-01	2.44E+00	**4.68E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
ZN-65	2007	-3.19E+00	5.48E+00	**7.68E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
NB-95	2007	-1.10E+00	2.46E+00	**4.29E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
ZR-95	2007	-1.89E+00	4.07E+00	**7.10E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
CS-134	2007	-2.91E-01	2.53E+00	**3.77E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
CS-137	2007	-1.96E+00	2.50E+00	**4.24E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
BA-140	2007	-3.47E+00	9.88E+00	**1.66E+01**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No
LA-140	2007	7.11E-01	2.84E+00	**5.64E+00**	pCi/L		3227.88	ml	08/08/06 16:50	08/10/06	8068	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/14/06 15:57

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29515

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-120S-080806-GL-007** Collect Start: 08/08/2006 16:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/09/2006 % Moisture:
LIMS Number: L29515-7

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	1.32E+02	1.18E+02	**1.81E+02**	pCi/L		10	ml		08/11/06	60	M	U		
TOTAL SR	2018	4.02E-01	4.79E-01	**9.02E-01**	pCi/L		450	ml	08/08/06 16:10	08/14/06	120	M	U		
MN-54	2007	6.00E-03	2.10E+00	**3.42E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
CO-58	2007	1.04E+00	2.05E+00	**3.46E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
FE-59	2007	-3.77E+00	4.07E+00	**6.03E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
CO-60	2007	-3.85E-01	2.06E+00	**3.38E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
ZN-65	2007	-1.17E+01	5.07E+00	**6.69E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
NB-95	2007	4.09E-01	2.03E+00	**3.36E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
ZR-95	2007	-2.84E-01	3.43E+00	**5.60E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
CS-134	2007	2.74E+00	2.20E+00	**3.46E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
CS-137	2007	-1.50E-01	2.24E+00	**3.68E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
BA-140	2007	3.24E+00	7.91E+00	**1.34E+01**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No
LA-140	2007	-8.37E-03	2.35E+00	**3.88E+00**	pCi/L		2852.81	ml	08/08/06 16:10	08/10/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
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Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L29515

8/14/2006 4:00:17PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4302-1	H-3 (DIST)	WO	08/10/2006 17:02	< 1.810E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4302-2	H-3 (DIST)	WO	08/10/2006 18:06	5.05E+002	5.830E+02	pCi/Total	115.5	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4302-3 L29515-1	H-3 (DIST)	WG	08/10/2006 18:23	< 1.790E+02	< 1.810E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L29515

8/14/2006 4:00:17PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4309-1	TOTAL SR	WO	08/14/2006 16:05	< 7.930E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4309-2	TOTAL SR	WO	08/14/2006 16:05	5.84E+001	6.180E+01	pCi/Total	105.9	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4309-3 L29515-1	TOTAL SR	WG	08/14/2006 16:05	< 1.460E+00	< 1.320E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Aug 14 2006, 04:12 pm

Work Order: *L29515* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29515-1		H-3 DIST		10 ml			0		10-aug-06 19:27	LS7	96	60	1.87	60	.207		DW
WG-DN-MW-DN-122I-080806-GL-001																	
Activity: -5.89E+01 Error: 1.05E+02			MDC: 1.79E+02 *														
L29515-2		H-3 DIST		10 ml			0		10-aug-06 20:31	LS7	96	60	1.87	60	.205		DW
WG-DN-MW-DN-122S-080806-GL-002																	
Activity: -5.93E+01 Error: 1.06E+02			MDC: 1.81E+02 *														
L29515-3		H-3 DIST		10 ml			0		10-aug-06 21:34	LS7	133	60	1.87	60	.203		DW
WG-DN-MW-DN-121S-080806-GL-003																	
Activity: 7.54E+01 Error: 1.16E+02			MDC: 1.82E+02 *														
L29515-4		H-3 DIST		10 ml			0		10-aug-06 22:38	LS7	105	60	1.87	60	.2		DW
WG-DN-MW-DN-123I-080806-GL-004																	
Activity: -2.71E+01 Error: 1.11E+02			MDC: 1.86E+02 *														
L29515-5		H-3 DIST		10 ml			0		10-aug-06 23:41	LS7	97	60	1.87	60	.206		DW
RB-DN-MW-DN-120I-080806-GL-005																	
Activity: -5.69E+01 Error: 1.05E+02			MDC: 1.8E+02 *														
L29515-6		H-3 DIST		10 ml			0		11-aug-06 00:45	LS7	115	60	1.87	60	.203		DW
WG-DN-MW-DN-120I-080806-GL-006																	
Activity: 1.11E+01 Error: 1.11E+02			MDC: 1.82E+02 *														
L29515-7		H-3 DIST		10 ml			0		11-aug-06 01:48	LS7	148	60	1.87	60	.205		DW
WG-DN-MW-DN-120S-080806-GL-007																	
Activity: 1.32E+02 Error: 1.18E+02			MDC: 1.81E+02 *														

Work Order: *L29515* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29515-1		TOTAL SR	08-aug-06 08:50	450 ml	14-aug-06 09:15		0	71.43	14-aug-06 16:08	Y1A	67	120	279	400	.341	1	LCB
WG-DN-MW-DN-122I-080806-GL-001																	
Activity: -5.73E-01 Error: 6.58E-01 MDC: 1.46E+00 *																	
L29515-2		TOTAL SR	08-aug-06 10:05	450 ml	14-aug-06 09:15		0	70.88	14-aug-06 16:08	Y1B	100	120	279	400	.351	1	LCB
WG-DN-MW-DN-122S-080806-GL-002																	
Activity: 5.47E-01 Error: 7.5E-01 MDC: 1.43E+00 *																	
L29515-3		TOTAL SR	08-aug-06 12:05	450 ml	14-aug-06 09:15		0	112.09	14-aug-06 16:08	Y1C	118	120	300	400	.345	1	LCB
WG-DN-MW-DN-121S-080806-GL-003																	
Activity: 6.04E-01 Error: 5.19E-01 MDC: 9.53E-01 *																	
L29515-4		TOTAL SR	08-aug-06 14:30	450 ml	14-aug-06 09:15		0	73.08	14-aug-06 16:08	Y1D	63	120	305	400	.362	1	LCB
WG-DN-MW-DN-123I-080806-GL-004																	
Activity: -8.99E-01 Error: 6E-01 MDC: 1.41E+00 *																	
L29515-5		TOTAL SR	08-aug-06 14:40	450 ml	14-aug-06 09:15		0	115.38	14-aug-06 16:08	Y2A	85	120	280	400	.349	1	LCB
RB-DN-MW-DN-120I-080806-GL-005																	
Activity: 2.07E-02 Error: 4.36E-01 MDC: 8.86E-01 *																	
L29515-6		TOTAL SR	08-aug-06 16:50	450 ml	14-aug-06 09:15		0	113.19	14-aug-06 16:08	Y2B	106	120	315	400	.356	1	LCB
WG-DN-MW-DN-120I-080806-GL-006																	
Activity: 2.38E-01 Error: 4.8E-01 MDC: 9.38E-01 *																	
L29515-7		TOTAL SR	08-aug-06 16:10	450 ml	14-aug-06 09:15		0	110.44	14-aug-06 16:08	Y2C	99	120	268	400	.35	1	LCB
WG-DN-MW-DN-120S-080806-GL-007																	
Activity: 4.02E-01 Error: 4.79E-01 MDC: 9.02E-01 *																	

Sec. Review: Analyst: LIMS: ✓

100

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 10-AUG-2006 17:55:32.59
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 10-AUG-2006 15:38:05.28

LIMS No., Customer Name, Client ID: WG L29515-1 DRESDEN

Sample ID : 04L29515-1
Sample Type : WG
Quantity : 3.20630E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 8-AUG-2006 08:50:00.0
Geometry : 043L082004
BKGFILE : 04BG072806MT
Real Time : 0 02:17:19.18
Live time : 0 02:17:17.70

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.49*	63	235	1.43	133.87	6.70E-01	7.62E-03	45.2	1.03E+00
2	1	140.10*	38	191	1.43	281.12	2.04E+00	4.59E-03	66.8	1.95E+00
3	1	198.95*	5	136	0.78	398.85	1.86E+00	5.46E-04	516.7	5.99E+00
4	1	238.54*	16	106	0.87	478.05	1.68E+00	1.92E-03	121.7	2.82E+00
5	1	295.05*	22	106	1.44	591.09	1.46E+00	2.64E-03	86.8	3.31E+00
6	1	352.00*	69	71	0.84	704.99	1.28E+00	8.40E-03	25.0	5.32E-01
7	1	595.73	33	42	1.72	1192.49	8.63E-01	4.00E-03	32.5	1.42E+01
8	1	609.54*	90	45	2.23	1220.10	8.48E-01	1.09E-02	20.8	1.89E+00
9	1	847.30*	14	41	2.24	1695.59	6.58E-01	1.73E-03	105.3	4.97E-01
10	1	1331.47*	38	28	11.04	2663.72	4.61E-01	4.56E-03	36.6	1.54E+00
11	1	1460.45*	47	6	2.93	2921.57	4.30E-01	5.67E-03	23.2	9.32E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	47	10.67*	4.297E-01	1.042E+02	1.042E+02	46.37
TH-228	238.63	16	44.60*	1.680E+00	2.161E+00	2.166E+00	243.32
	240.98	------	3.95	1.669E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L29515-1 Acquisition date : 10-AUG-2006 15:38:05

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.042E+02	1.042E+02	0.483E+02	46.37	
TH-228	1.91Y	1.00	2.161E+00	2.166E+00	5.270E+00	243.32	
	Total Activity :		1.064E+02	1.064E+02			
	Grand Total Activity :		1.064E+02	1.064E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 3
Sample ID : 04L29515-1 Acquisition date : 10-AUG-2006 15:38:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.49	63	235	1.43	133.87	130	8	7.62E-03	90.5	6.70E-01	
1	140.10	38	191	1.43	281.12	277	8	4.59E-03	****	2.04E+00	
1	198.95	5	136	0.78	398.85	395	9	5.46E-04	****	1.86E+00	
1	295.05	22	106	1.44	591.09	588	8	2.64E-03	****	1.46E+00	
1	352.00	69	71	0.84	704.99	701	7	8.40E-03	49.9	1.28E+00	
1	595.73	33	42	1.72	1192.49	1188	8	4.00E-03	65.1	8.63E-01	
1	609.54	90	45	2.23	1220.10	1212	15	1.09E-02	41.6	8.48E-01	
1	847.30	14	41	2.24	1695.59	1687	14	1.73E-03	****	6.58E-01	
1	1331.47	38	28	11.04	2663.72	2658	21	4.56E-03	73.2	4.61E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.042E+02	1.042E+02	0.483E+02	46.37	
TH-228	1.91Y	1.00	2.161E+00	2.166E+00	5.270E+00	243.32	
	Total Activity :		1.064E+02	1.064E+02			
	Grand Total Activity :		1.064E+02	1.064E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.042E+02	4.834E+01	4.055E+01	0.000E+00	2.570
TH-228	2.166E+00	5.270E+00	6.745E+00	0.000E+00	0.321

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-6.344E-01	2.073E+01	3.388E+01	0.000E+00	-0.019
NA-24	3.547E+01	3.817E+01	7.169E+01	0.000E+00	0.495
CR-51	8.664E+00	1.878E+01	3.281E+01	0.000E+00	0.264
MN-54	-4.710E-01	2.398E+00	3.872E+00	0.000E+00	-0.122
CO-57	-1.989E-01	1.933E+00	3.215E+00	0.000E+00	-0.062
CO-58	-1.723E+00	2.370E+00	3.556E+00	0.000E+00	-0.485
FE-59	3.321E+00	5.037E+00	8.903E+00	0.000E+00	0.373
CO-60	-1.214E+00	3.341E+00	5.754E+00	0.000E+00	-0.211
ZN-65	-6.745E+00	6.597E+00	9.184E+00	0.000E+00	-0.735
SE-75	-1.355E+00	3.201E+00	4.925E+00	0.000E+00	-0.275
SR-85	-7.466E+00	3.444E+00	4.747E+00	0.000E+00	-1.573
Y-88	-2.226E-01	3.144E+00	4.999E+00	0.000E+00	-0.045
NB-94	-1.208E+00	2.222E+00	3.500E+00	0.000E+00	-0.345
NB-95	9.268E-02	2.509E+00	4.201E+00	0.000E+00	0.022
ZR-95	2.777E+00	4.019E+00	7.260E+00	0.000E+00	0.383
MO-99	2.907E+01	3.132E+01	5.781E+01	0.000E+00	0.503
RU-103	-2.760E+00	2.675E+00	3.932E+00	0.000E+00	-0.702
RU-106	8.779E-01	2.392E+01	3.854E+01	0.000E+00	0.023
AG-110m	-2.608E-01	2.487E+00	3.920E+00	0.000E+00	-0.067
SN-113	-1.794E+00	3.076E+00	4.865E+00	0.000E+00	-0.369
SB-124	-1.741E+00	2.636E+00	3.272E+00	0.000E+00	-0.532
SB-125	2.997E+00	6.614E+00	1.139E+01	0.000E+00	0.263
TE-129M	-1.743E+00	2.866E+01	4.687E+01	0.000E+00	-0.037
I-131	-4.351E-01	3.015E+00	4.990E+00	0.000E+00	-0.087
BA-133	7.049E-01	3.428E+00	5.182E+00	0.000E+00	0.136
CS-134	1.047E+00	2.334E+00	3.536E+00	0.000E+00	0.296
CS-136	1.124E+00	2.477E+00	4.352E+00	0.000E+00	0.258
CS-137	-2.188E+00	2.868E+00	4.145E+00	0.000E+00	-0.528
CE-139	-2.111E+00	2.156E+00	3.329E+00	0.000E+00	-0.634
BA-140	-9.902E-01	9.685E+00	1.556E+01	0.000E+00	-0.064
LA-140	-4.387E-01	3.395E+00	5.418E+00	0.000E+00	-0.081
CE-141	1.777E+00	3.543E+00	6.042E+00	0.000E+00	0.294
CE-144	7.323E+00	1.574E+01	2.688E+01	0.000E+00	0.272
EU-152	3.371E-01	7.011E+00	1.182E+01	0.000E+00	0.029
EU-154	7.822E-01	4.263E+00	7.203E+00	0.000E+00	0.109
RA-226	1.625E+01	5.889E+01	1.004E+02	0.000E+00	0.162
AC-228	-1.732E+00	1.048E+01	1.781E+01	0.000E+00	-0.097
TH-232	-1.730E+00	1.047E+01	1.780E+01	0.000E+00	-0.097
U-235	1.255E+00	1.825E+01	2.725E+01	0.000E+00	0.046
U-238	5.839E+01	3.037E+02	5.074E+02	0.000E+00	0.115
AM-241	-7.693E+00	2.292E+01	3.504E+01	0.000E+00	-0.220

A,04L29515-1 ,08/10/2006 17:55,08/08/2006 08:50, 3.206E+00,WG L29515-1 DR
B,04L29515-1 ,LIBD ,08/07/2006 09:38,043L082004

C,K-40	,YES,	1.042E+02,	4.834E+01,	4.055E+01,,	2.570
C,TH-228	,YES,	2.166E+00,	5.270E+00,	6.745E+00,,	0.321
C,BE-7	,NO ,	-6.344E-01,	2.073E+01,	3.388E+01,,	-0.019
C,NA-24	,NO ,	3.547E+01,	3.817E+01,	7.169E+01,,	0.495
C,CR-51	,NO ,	8.664E+00,	1.878E+01,	3.281E+01,,	0.264
C,MN-54	,NO ,	-4.710E-01,	2.398E+00,	3.872E+00,,	-0.122
C,CO-57	,NO ,	-1.989E-01,	1.933E+00,	3.215E+00,,	-0.062
C,CO-58	,NO ,	-1.723E+00,	2.370E+00,	3.556E+00,,	-0.485
C,FE-59	,NO ,	3.321E+00,	5.037E+00,	8.903E+00,,	0.373
C,CO-60	,NO ,	-1.214E+00,	3.341E+00,	5.754E+00,,	-0.211
C,ZN-65	,NO ,	-6.745E+00,	6.597E+00,	9.184E+00,,	-0.735
C,SE-75	,NO ,	-1.355E+00,	3.201E+00,	4.925E+00,,	-0.275
C,SR-85	,NO ,	-7.466E+00,	3.444E+00,	4.747E+00,,	-1.573
C,Y-88	,NO ,	-2.226E-01,	3.144E+00,	4.999E+00,,	-0.045
C,NB-94	,NO ,	-1.208E+00,	2.222E+00,	3.500E+00,,	-0.345
C,NB-95	,NO ,	9.268E-02,	2.509E+00,	4.201E+00,,	0.022
C,ZR-95	,NO ,	2.777E+00,	4.019E+00,	7.260E+00,,	0.383
C,MO-99	,NO ,	2.907E+01,	3.132E+01,	5.781E+01,,	0.503
C,RU-103	,NO ,	-2.760E+00,	2.675E+00,	3.932E+00,,	-0.702
C,RU-106	,NO ,	8.779E-01,	2.392E+01,	3.854E+01,,	0.023
C,AG-110m	,NO ,	-2.608E-01,	2.487E+00,	3.920E+00,,	-0.067
C,SN-113	,NO ,	-1.794E+00,	3.076E+00,	4.865E+00,,	-0.369
C,SB-124	,NO ,	-1.741E+00,	2.636E+00,	3.272E+00,,	-0.532
C,SB-125	,NO ,	2.997E+00,	6.614E+00,	1.139E+01,,	0.263
C,TE-129M	,NO ,	-1.743E+00,	2.866E+01,	4.687E+01,,	-0.037
C,I-131	,NO ,	-4.351E-01,	3.015E+00,	4.990E+00,,	-0.087
C,BA-133	,NO ,	7.049E-01,	3.428E+00,	5.182E+00,,	0.136
C,CS-134	,NO ,	1.047E+00,	2.334E+00,	3.536E+00,,	0.296
C,CS-136	,NO ,	1.124E+00,	2.477E+00,	4.352E+00,,	0.258
C,CS-137	,NO ,	-2.188E+00,	2.868E+00,	4.145E+00,,	-0.528
C,CE-139	,NO ,	-2.111E+00,	2.156E+00,	3.329E+00,,	-0.634
C,BA-140	,NO ,	-9.902E-01,	9.685E+00,	1.556E+01,,	-0.064
C,LA-140	,NO ,	-4.387E-01,	3.395E+00,	5.418E+00,,	-0.081
C,CE-141	,NO ,	1.777E+00,	3.543E+00,	6.042E+00,,	0.294
C,CE-144	,NO ,	7.323E+00,	1.574E+01,	2.688E+01,,	0.272
C,EU-152	,NO ,	3.371E-01,	7.011E+00,	1.182E+01,,	0.029
C,EU-154	,NO ,	7.822E-01,	4.263E+00,	7.203E+00,,	0.109
C,RA-226	,NO ,	1.625E+01,	5.889E+01,	1.004E+02,,	0.162
C,AC-228	,NO ,	-1.732E+00,	1.048E+01,	1.781E+01,,	-0.097
C,TH-232	,NO ,	-1.730E+00,	1.047E+01,	1.780E+01,,	-0.097
C,U-235	,NO ,	1.255E+00,	1.825E+01,	2.725E+01,,	0.046
C,U-238	,NO ,	5.839E+01,	3.037E+02,	5.074E+02,,	0.115
C,AM-241	,NO ,	-7.693E+00,	2.292E+01,	3.504E+01,,	-0.220

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 10-AUG-2006 13:38:53.74
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 10-AUG-2006 10:31:27.56

LIMS No., Customer Name, Client ID: WG L29515-2 DRESDEN

Sample ID : 04L29515-2
Sample Type : WG
Quantity : 3.32750E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 8-AUG-2006 10:05:00.0
Geometry : 0435L090804
BKGFILE : 04BG072806MT
Real Time : 0 03:07:22.03
Live time : 0 03:07:19.05

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	3	74.85*	137	510	0.85	150.61	9.21E-01	1.22E-02	27.5	6.88E-01
2	3	77.05*	385	434	0.76	155.01	9.89E-01	3.43E-02	10.1	
3	1	87.24*	130	557	0.97	175.39	1.27E+00	1.16E-02	32.1	4.98E-01
4	1	198.28*	50	413	1.14	397.52	1.68E+00	4.48E-03	69.0	1.63E+00
5	2	238.74*	119	320	1.26	478.45	1.52E+00	1.06E-02	28.5	1.08E+00
6	2	241.99	472	264	1.13	484.96	1.51E+00	4.20E-02	7.4	
7	1	275.16	53	177	1.22	551.30	1.39E+00	4.69E-03	42.4	2.65E+00
8	1	295.23*	873	345	1.04	591.45	1.32E+00	7.76E-02	5.4	1.93E+00
9	1	351.90*	1565	252	1.14	704.79	1.17E+00	1.39E-01	3.3	5.58E-01
10	1	609.28*	1313	215	1.35	1219.57	7.73E-01	1.17E-01	3.7	3.58E+00
11	1	666.47	75	104	8.23	1333.97	7.21E-01	6.67E-03	35.1	2.34E+00
12	1	768.33	150	53	1.90	1537.67	6.46E-01	1.33E-02	13.3	3.26E+00
13	1	846.07*	76	44	5.25	1693.12	6.00E-01	6.73E-03	21.9	3.46E+00
14	1	933.93	43	82	1.44	1868.83	5.55E-01	3.84E-03	45.9	8.73E-01
15	1	1120.11*	283	49	1.87	2241.11	4.81E-01	2.52E-02	8.4	1.08E+00
16	1	1154.80	59	45	3.19	2310.48	4.70E-01	5.27E-03	29.8	8.28E-01
17	1	1237.84*	136	38	2.68	2476.51	4.45E-01	1.21E-02	13.2	9.91E-01
18	1	1281.45	62	55	1.19	2563.70	4.33E-01	5.56E-03	25.9	1.15E+01
19	1	1377.80	105	43	3.07	2756.35	4.10E-01	9.35E-03	17.4	1.21E+00
20	1	1509.35	47	37	3.26	3019.34	3.83E-01	4.15E-03	32.9	8.69E-01
21	1	1729.68	68	10	2.37	3459.80	3.48E-01	6.01E-03	16.1	5.92E-01
22	1	1764.25*	255	10	2.50	3528.90	3.43E-01	2.27E-02	7.3	1.06E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	119	44.60*	1.520E+00	1.265E+01	1.267E+01	56.93
	240.98	------	3.95	1.511E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L29515-2

Acquisition date : 10-AUG-2006 10:31:27

Total number of lines in spectrum	22	
Number of unidentified lines	21	
Number of lines tentatively identified by NID	1	4.55%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.265E+01	1.267E+01	0.721E+01	56.93	
	Total Activity :		1.265E+01	1.267E+01			
	Grand Total Activity :		1.265E+01	1.267E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 3
Sample ID : 04L29515-2 Acquisition date : 10-AUG-2006 10:31:27

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	74.85	137	510	0.85	150.61	147	13	1.22E-02	55.1	9.21E-01	
3	77.05	385	434	0.76	155.01	147	13	3.43E-02	20.1	9.89E-01	
1	87.24	130	557	0.97	175.39	172	7	1.16E-02	64.2	1.27E+00	
1	198.28	50	413	1.14	397.52	395	7	4.48E-03	****	1.68E+00	
2	241.99	472	264	1.13	484.96	475	15	4.20E-02	14.7	1.51E+00	
1	275.16	53	177	1.22	551.30	549	6	4.69E-03	84.8	1.39E+00	
1	295.23	873	345	1.04	591.45	587	11	7.76E-02	10.8	1.32E+00	
1	351.90	1565	252	1.14	704.79	699	13	1.39E-01	6.7	1.17E+00	
1	609.28	1313	215	1.35	1219.57	1213	15	1.17E-01	7.4	7.73E-01	
1	666.47	75	104	8.23	1333.97	1327	19	6.67E-03	70.2	7.21E-01	
1	768.33	150	53	1.90	1537.67	1532	13	1.33E-02	26.5	6.46E-01	
1	846.07	76	44	5.25	1693.12	1690	13	6.73E-03	43.7	6.00E-01	
1	933.93	43	82	1.44	1868.83	1863	13	3.84E-03	91.8	5.55E-01	
1	1120.11	283	49	1.87	2241.11	2234	17	2.52E-02	16.8	4.81E-01	
1	1154.80	59	45	3.19	2310.48	2301	18	5.27E-03	59.5	4.70E-01	
1	1237.84	136	38	2.68	2476.51	2470	15	1.21E-02	26.5	4.45E-01	
1	1281.45	62	55	1.19	2563.70	2557	14	5.56E-03	51.8	4.33E-01	
1	1377.80	105	43	3.07	2756.35	2747	17	9.35E-03	34.7	4.10E-01	
1	1509.35	47	37	3.26	3019.34	3013	15	4.15E-03	65.7	3.83E-01	
1	1729.68	68	10	2.37	3459.80	3452	14	6.01E-03	32.3	3.48E-01	
1	1764.25	255	10	2.50	3528.90	3519	20	2.27E-02	14.6	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	22	
Number of unidentified lines	21	
Number of lines tentatively identified by NID	1	4.55%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.265E+01	1.267E+01	0.721E+01	56.93	
			---	---			
	Total Activity :		1.265E+01	1.267E+01			
Grand Total Activity :			1.265E+01	1.267E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Activity	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)		(pCi/L)		
TH-228	1.267E+01	7.215E+00	1.069E+01	0.000E+00	1.185

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.602E+01		3.037E+01	4.826E+01	0.000E+00	-0.539
NA-24	-3.907E+01		4.944E+01	6.200E+01	0.000E+00	-0.630
K-40	3.146E+01		4.765E+01	9.047E+01	0.000E+00	0.348
CR-51	-9.975E+00		3.201E+01	5.205E+01	0.000E+00	-0.192
MN-54	8.991E-01		3.582E+00	5.971E+00	0.000E+00	0.151
CO-57	-1.764E+00		3.426E+00	5.655E+00	0.000E+00	-0.312
CO-58	-3.471E+00		3.691E+00	5.683E+00	0.000E+00	-0.611
FE-59	5.409E+00		6.806E+00	1.190E+01	0.000E+00	0.455
CO-60	-6.611E-01		4.057E+00	6.920E+00	0.000E+00	-0.096
ZN-65	3.996E+01		1.011E+01	1.904E+01	0.000E+00	2.099
SE-75	-2.685E+00		4.883E+00	7.994E+00	0.000E+00	-0.336
SR-85	8.731E+00		4.110E+00	7.344E+00	0.000E+00	1.189
Y-88	3.973E-01		4.115E+00	6.868E+00	0.000E+00	0.058
NB-94	-2.721E-01		3.181E+00	5.261E+00	0.000E+00	-0.052
NB-95	1.617E+01		4.762E+00	8.370E+00	0.000E+00	1.932
ZR-95	-6.172E+00		6.161E+00	9.500E+00	0.000E+00	-0.650
MO-99	1.380E+01		4.540E+01	7.657E+01	0.000E+00	0.180
RU-103	1.846E+00		3.563E+00	6.049E+00	0.000E+00	0.305
RU-106	-5.390E+00		3.100E+01	4.980E+01	0.000E+00	-0.108
AG-110m	-2.314E+00		3.913E+00	5.275E+00	0.000E+00	-0.439
SN-113	-1.978E+00		4.825E+00	7.675E+00	0.000E+00	-0.258
SB-124	-2.919E+00		4.745E+00	6.270E+00	0.000E+00	-0.466
SB-125	2.484E+00		1.045E+01	1.766E+01	0.000E+00	0.141
TE-129M	2.585E+00		4.203E+01	7.017E+01	0.000E+00	0.037
I-131	1.708E+00		4.159E+00	6.909E+00	0.000E+00	0.247
BA-133	7.228E+00		5.337E+00	8.134E+00	0.000E+00	0.889
CS-134	1.041E+01		4.675E+00	7.471E+00	0.000E+00	1.394
CS-136	3.086E+00		4.117E+00	7.078E+00	0.000E+00	0.436
CS-137	1.103E+00		4.331E+00	6.094E+00	0.000E+00	0.181
CE-139	1.708E+00		3.734E+00	6.212E+00	0.000E+00	0.275
BA-140	-6.214E+00		1.372E+01	2.199E+01	0.000E+00	-0.283
LA-140	-1.373E-01		4.483E+00	7.305E+00	0.000E+00	-0.019
CE-141	5.660E+00		6.371E+00	1.080E+01	0.000E+00	0.524
CE-144	-9.073E+00		2.734E+01	4.512E+01	0.000E+00	-0.201
EU-152	7.060E+00		1.283E+01	1.932E+01	0.000E+00	0.365
EU-154	-7.700E-01		7.275E+00	1.213E+01	0.000E+00	-0.063
RA-226	3.162E+01		9.430E+01	1.562E+02	0.000E+00	0.202
AC-228	-1.120E+01		1.400E+01	2.188E+01	0.000E+00	-0.512
TH-232	-1.120E+01		1.399E+01	2.186E+01	0.000E+00	-0.512
U-235	-3.192E+01		2.897E+01	4.667E+01	0.000E+00	-0.684
U-238	4.689E+01		4.211E+02	7.049E+02	0.000E+00	0.067
AM-241	-1.979E+01		3.291E+01	5.314E+01	0.000E+00	-0.372

A,04L29515-2 ,08/10/2006 13:38,08/08/2006 10:05, 3.328E+00,WG L29515-2 DR
B,04L29515-2 ,LIBD ,08/07/2006 09:38,0435L090804

C,TH-228	,YES,	1.267E+01,	7.215E+00,	1.069E+01,,	1.185
C,BE-7	,NO ,	-2.602E+01,	3.037E+01,	4.826E+01,,	-0.539
C,NA-24	,NO ,	-3.907E+01,	4.944E+01,	6.200E+01,,	-0.630
C,K-40	,NO ,	3.146E+01,	4.765E+01,	9.047E+01,,	0.348
C,CR-51	,NO ,	-9.975E+00,	3.201E+01,	5.205E+01,,	-0.192
C,MN-54	,NO ,	8.991E-01,	3.582E+00,	5.971E+00,,	0.151
C,CO-57	,NO ,	-1.764E+00,	3.426E+00,	5.655E+00,,	-0.312
C,CO-58	,NO ,	-3.471E+00,	3.691E+00,	5.683E+00,,	-0.611
C,FE-59	,NO ,	5.409E+00,	6.806E+00,	1.190E+01,,	0.455
C,CO-60	,NO ,	-6.611E-01,	4.057E+00,	6.920E+00,,	-0.096
C,ZN-65	,NO ,	3.996E+01,	1.011E+01,	1.904E+01,,	2.099
C,SE-75	,NO ,	-2.685E+00,	4.883E+00,	7.994E+00,,	-0.336
C,SR-85	,NO ,	8.731E+00,	4.110E+00,	7.344E+00,,	1.189
C,Y-88	,NO ,	3.973E-01,	4.115E+00,	6.868E+00,,	0.058
C,NB-94	,NO ,	-2.721E-01,	3.181E+00,	5.261E+00,,	-0.052
C,NB-95	,NO ,	1.617E+01,	4.762E+00,	8.370E+00,,	1.932
C,ZR-95	,NO ,	-6.172E+00,	6.161E+00,	9.500E+00,,	-0.650
C,MO-99	,NO ,	1.380E+01,	4.540E+01,	7.657E+01,,	0.180
C,RU-103	,NO ,	1.846E+00,	3.563E+00,	6.049E+00,,	0.305
C,RU-106	,NO ,	-5.390E+00,	3.100E+01,	4.980E+01,,	-0.108
C,AG-110m	,NO ,	-2.314E+00,	3.913E+00,	5.275E+00,,	-0.439
C,SN-113	,NO ,	-1.978E+00,	4.825E+00,	7.675E+00,,	-0.258
C,SB-124	,NO ,	-2.919E+00,	4.745E+00,	6.270E+00,,	-0.466
C,SB-125	,NO ,	2.484E+00,	1.045E+01,	1.766E+01,,	0.141
C,TE-129M	,NO ,	2.585E+00,	4.203E+01,	7.017E+01,,	0.037
C,I-131	,NO ,	1.708E+00,	4.159E+00,	6.909E+00,,	0.247
C,BA-133	,NO ,	7.228E+00,	5.337E+00,	8.134E+00,,	0.889
C,CS-134	,NO ,	1.041E+01,	4.675E+00,	7.471E+00,,	1.394
C,CS-136	,NO ,	3.086E+00,	4.117E+00,	7.078E+00,,	0.436
C,CS-137	,NO ,	1.103E+00,	4.331E+00,	6.094E+00,,	0.181
C,CE-139	,NO ,	1.708E+00,	3.734E+00,	6.212E+00,,	0.275
C,BA-140	,NO ,	-6.214E+00,	1.372E+01,	2.199E+01,,	-0.283
C,LA-140	,NO ,	-1.373E-01,	4.483E+00,	7.305E+00,,	-0.019
C,CE-141	,NO ,	5.660E+00,	6.371E+00,	1.080E+01,,	0.524
C,CE-144	,NO ,	-9.073E+00,	2.734E+01,	4.512E+01,,	-0.201
C,EU-152	,NO ,	7.060E+00,	1.283E+01,	1.932E+01,,	0.365
C,EU-154	,NO ,	-7.700E-01,	7.275E+00,	1.213E+01,,	-0.063
C,RA-226	,NO ,	3.162E+01,	9.430E+01,	1.562E+02,,	0.202
C,AC-228	,NO ,	-1.120E+01,	1.400E+01,	2.188E+01,,	-0.512
C,TH-232	,NO ,	-1.120E+01,	1.399E+01,	2.186E+01,,	-0.512
C,U-235	,NO ,	-3.192E+01,	2.897E+01,	4.667E+01,,	-0.684
C,U-238	,NO ,	4.689E+01,	4.211E+02,	7.049E+02,,	0.067
C,AM-241	,NO ,	-1.979E+01,	3.291E+01,	5.314E+01,,	-0.372

Sec. Review: Analyst: KDS LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 15:19:43.76
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 10-AUG-2006 10:44:05.85

LIMS No., Customer Name, Client ID: WG L29515-3 DRESDEN

Sample ID : 07L29515-3
Sample Type : WG
Quantity : 3.33010E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 8-AUG-2006 12:05:00.0
Geometry : 0735L090904
BKGFILE : 07BG072806MT
Real Time : 0 03:00:03.07
Live time : 0 03:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	53.30	93	336	1.12	107.56	2.92E-01	8.65E-03	32.4	2.55E+00
2	1	66.16*	92	659	1.42	133.33	7.19E-01	8.55E-03	50.2	1.18E+00
3	1	77.00*	270	664	0.77	155.04	1.10E+00	2.50E-02	17.3	1.50E+00
4	1	87.02*	126	608	0.79	175.11	1.41E+00	1.16E-02	35.4	8.49E-01
5	3	238.63*	196	381	1.65	478.71	1.81E+00	1.82E-02	20.5	2.05E+00
6	3	241.94*	479	279	1.31	485.34	1.80E+00	4.43E-02	7.8	
7	1	295.08*	945	347	1.07	591.75	1.61E+00	8.75E-02	5.2	2.29E+00
8	1	351.79*	1628	316	1.18	705.29	1.43E+00	1.51E-01	3.5	1.93E+00
9	1	583.11*	46	122	1.87	1168.36	1.01E+00	4.25E-03	54.4	1.44E+00
10	1	596.10	82	141	3.81	1194.37	9.96E-01	7.62E-03	35.2	2.33E+00
11	1	609.12*	1326	115	1.46	1220.42	9.81E-01	1.23E-01	3.3	2.10E+00
12	1	767.81	104	95	1.67	1538.03	8.29E-01	9.59E-03	20.9	1.14E+00
13	1	934.17	48	65	1.90	1870.94	7.17E-01	4.47E-03	33.5	1.40E+00
14	1	1120.14*	291	56	1.90	2243.00	6.26E-01	2.69E-02	8.5	3.46E+00
15	1	1238.18*	118	52	2.12	2479.14	5.81E-01	1.09E-02	16.3	8.65E-01
16	1	1407.57	57	19	2.24	2817.93	5.29E-01	5.25E-03	20.3	1.12E+00
17	1	1660.67	23	14	2.31	3324.03	4.72E-01	2.17E-03	35.5	3.61E+00
18	1	1764.65*	270	6	2.84	3531.91	4.54E-01	2.50E-02	7.0	1.30E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	196	44.60*	1.815E+00	1.822E+01	1.826E+01	40.91
	240.98	479	3.95	1.802E+00	5.055E+02	5.065E+02	15.58

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29515-3

Acquisition date : 10-AUG-2006 10:44:05

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.822E+01	1.826E+01	0.747E+01	40.91	
	Total Activity :		1.822E+01	1.826E+01			
	Grand Total Activity :		1.822E+01	1.826E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L29515-3 Acquisition date : 10-AUG-2006 10:44:05

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	53.30	93	336	1.12	107.56	105	6	8.65E-03	64.7	2.92E-01	
1	66.16	92	659	1.42	133.33	130	8	8.55E-03	****	7.19E-01	
1	77.00	270	664	0.77	155.04	153	7	2.50E-02	34.5	1.10E+00	
1	87.02	126	608	0.79	175.11	172	8	1.16E-02	70.9	1.41E+00	
1	295.08	945	347	1.07	591.75	586	12	8.75E-02	10.4	1.61E+00	
1	351.79	1628	316	1.18	705.29	698	14	1.51E-01	6.9	1.43E+00	
1	583.11	46	122	1.87	1168.36	1163	12	4.25E-03	****	1.01E+00	T
1	596.10	82	141	3.81	1194.37	1187	17	7.62E-03	70.5	9.96E-01	
1	609.12	1326	115	1.46	1220.42	1213	14	1.23E-01	6.6	9.81E-01	
1	767.81	104	95	1.67	1538.03	1532	11	9.59E-03	41.8	8.29E-01	
1	934.17	48	65	1.90	1870.94	1867	9	4.47E-03	67.0	7.17E-01	
1	1120.14	291	56	1.90	2243.00	2235	15	2.69E-02	16.9	6.26E-01	
1	1238.18	118	52	2.12	2479.14	2472	14	1.09E-02	32.6	5.81E-01	
1	1407.57	57	19	2.24	2817.93	2812	11	5.25E-03	40.5	5.29E-01	T
1	1660.67	23	14	2.31	3324.03	3320	9	2.17E-03	71.0	4.72E-01	
1	1764.65	270	6	2.84	3531.91	3520	23	2.50E-02	13.9	4.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.822E+01	1.826E+01	0.747E+01	40.91	
Total Activity :			1.822E+01	1.826E+01			
Grand Total Activity :			1.822E+01	1.826E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	1.826E+01	7.470E+00	7.706E+00	0.000E+00	2.370

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.118E+01		2.148E+01	3.547E+01	0.000E+00	0.315
NA-24	-1.480E+01		2.503E+01	3.808E+01	0.000E+00	-0.389
K-40	-1.899E+01		3.720E+01	6.949E+01	0.000E+00	-0.273
CR-51	-8.769E-01		2.274E+01	3.727E+01	0.000E+00	-0.024
MN-54	-3.431E+00		2.725E+00	3.975E+00	0.000E+00	-0.863
CO-57	-1.631E+00		2.719E+00	4.296E+00	0.000E+00	-0.380
CO-58	-2.498E+00		2.601E+00	3.896E+00	0.000E+00	-0.641
FE-59	-2.055E+00		4.981E+00	7.971E+00	0.000E+00	-0.258
CO-60	4.811E-01		2.671E+00	4.440E+00	0.000E+00	0.108
ZN-65	4.266E+00		6.238E+00	9.627E+00	0.000E+00	0.443
SE-75	1.962E+00		3.393E+00	5.773E+00	0.000E+00	0.340
SR-85	-1.007E+01		3.171E+00	4.595E+00	0.000E+00	-2.191
Y-88	1.681E+00		2.467E+00	4.436E+00	0.000E+00	0.379
NB-94	1.111E+00		2.403E+00	4.074E+00	0.000E+00	0.273
NB-95	8.556E+00		3.221E+00	5.610E+00	0.000E+00	1.525
ZR-95	-4.188E-01		4.162E+00	6.741E+00	0.000E+00	-0.062
MO-99	4.929E+00		2.840E+01	4.712E+01	0.000E+00	0.105
RU-103	-1.067E+00		2.486E+00	4.084E+00	0.000E+00	-0.261
RU-106	-6.524E+00		2.161E+01	3.504E+01	0.000E+00	-0.186
AG-110m	2.034E-01		2.271E+00	3.774E+00	0.000E+00	0.054
SN-113	-1.318E+00		3.383E+00	5.363E+00	0.000E+00	-0.246
SB-124	2.456E+00		3.465E+00	3.834E+00	0.000E+00	0.640
SB-125	7.968E+00		7.753E+00	1.319E+01	0.000E+00	0.604
TE-129M	4.826E+00		3.068E+01	4.960E+01	0.000E+00	0.097
I-131	-8.588E-01		2.971E+00	4.760E+00	0.000E+00	-0.180
BA-133	-2.290E+00		4.040E+00	5.526E+00	0.000E+00	-0.414
CS-134	4.506E-01		2.919E+00	3.754E+00	0.000E+00	0.120
CS-136	-1.571E+00		2.414E+00	3.675E+00	0.000E+00	-0.427
CS-137	-3.119E+00		2.883E+00	4.407E+00	0.000E+00	-0.708
CE-139	8.426E-01		2.806E+00	4.504E+00	0.000E+00	0.187
BA-140	-1.810E-01		9.618E+00	1.609E+01	0.000E+00	-0.011
LA-140	-3.487E-01		3.278E+00	5.412E+00	0.000E+00	-0.064
CE-141	-5.936E+00		4.905E+00	7.503E+00	0.000E+00	-0.791
CE-144	3.358E+01		2.149E+01	3.633E+01	0.000E+00	0.924
EU-152	-1.921E+00		8.566E+00	1.336E+01	0.000E+00	-0.144
EU-154	-3.498E+00		5.718E+00	9.027E+00	0.000E+00	-0.387
RA-226	-4.508E+01		6.773E+01	1.148E+02	0.000E+00	-0.393
AC-228	-1.262E+00		1.057E+01	1.788E+01	0.000E+00	-0.071
TH-232	-1.261E+00		1.057E+01	1.787E+01	0.000E+00	-0.071
U-235	1.538E+00		2.176E+01	3.478E+01	0.000E+00	0.044
U-238	2.746E+02		2.922E+02	5.149E+02	0.000E+00	0.533
AM-241	-1.884E+00		2.442E+01	4.060E+01	0.000E+00	-0.046

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A,07L29515-3      ,08/11/2006 15:19,08/08/2006 12:05,   3.330E+00,WG L29515-3 DR
B,07L29515-3      ,LIBD                ,08/07/2006 09:38,0735L090904
C,TH-228  ,YES,    1.826E+01,   7.470E+00,   7.706E+00,,    2.370
C,BE-7    ,NO ,    1.118E+01,   2.148E+01,   3.547E+01,,    0.315
C,NA-24   ,NO ,   -1.480E+01,   2.503E+01,   3.808E+01,,   -0.389
C,K-40    ,NO ,   -1.899E+01,   3.720E+01,   6.949E+01,,   -0.273
C,CR-51   ,NO ,   -8.769E-01,   2.274E+01,   3.727E+01,,   -0.024
C,MN-54   ,NO ,   -3.431E+00,   2.725E+00,   3.975E+00,,   -0.863
C,CO-57   ,NO ,   -1.631E+00,   2.719E+00,   4.296E+00,,   -0.380
C,CO-58   ,NO ,   -2.498E+00,   2.601E+00,   3.896E+00,,   -0.641
C,FE-59   ,NO ,   -2.055E+00,   4.981E+00,   7.971E+00,,   -0.258
C,CO-60   ,NO ,    4.811E-01,   2.671E+00,   4.440E+00,,    0.108
C,ZN-65   ,NO ,    4.266E+00,   6.238E+00,   9.627E+00,,    0.443
C,SE-75   ,NO ,    1.962E+00,   3.393E+00,   5.773E+00,,    0.340
C,SR-85   ,NO ,   -1.007E+01,   3.171E+00,   4.595E+00,,   -2.191
C,Y-88    ,NO ,    1.681E+00,   2.467E+00,   4.436E+00,,    0.379
C,NB-94   ,NO ,    1.111E+00,   2.403E+00,   4.074E+00,,    0.273
C,NB-95   ,NO ,    8.556E+00,   3.221E+00,   5.610E+00,,    1.525
C,ZR-95   ,NO ,   -4.188E-01,   4.162E+00,   6.741E+00,,   -0.062
C,MO-99   ,NO ,    4.929E+00,   2.840E+01,   4.712E+01,,    0.105
C,RU-103  ,NO ,   -1.067E+00,   2.486E+00,   4.084E+00,,   -0.261
C,RU-106  ,NO ,   -6.524E+00,   2.161E+01,   3.504E+01,,   -0.186
C,AG-110m ,NO ,    2.034E-01,   2.271E+00,   3.774E+00,,    0.054
C,SN-113  ,NO ,   -1.318E+00,   3.383E+00,   5.363E+00,,   -0.246
C,SB-124  ,NO ,    2.456E+00,   3.465E+00,   3.834E+00,,    0.640
C,SB-125  ,NO ,    7.968E+00,   7.753E+00,   1.319E+01,,    0.604
C,TE-129M ,NO ,    4.826E+00,   3.068E+01,   4.960E+01,,    0.097
C,I-131   ,NO ,   -8.588E-01,   2.971E+00,   4.760E+00,,   -0.180
C,BA-133  ,NO ,   -2.290E+00,   4.040E+00,   5.526E+00,,   -0.414
C,CS-134  ,NO ,    4.506E-01,   2.919E+00,   3.754E+00,,    0.120
C,CS-136  ,NO ,   -1.571E+00,   2.414E+00,   3.675E+00,,   -0.427
C,CS-137  ,NO ,   -3.119E+00,   2.883E+00,   4.407E+00,,   -0.708
C,CE-139  ,NO ,    8.426E-01,   2.806E+00,   4.504E+00,,    0.187
C,BA-140  ,NO ,   -1.810E-01,   9.618E+00,   1.609E+01,,   -0.011
C,LA-140  ,NO ,   -3.487E-01,   3.278E+00,   5.412E+00,,   -0.064
C,CE-141  ,NO ,   -5.936E+00,   4.905E+00,   7.503E+00,,   -0.791
C,CE-144  ,NO ,    3.358E+01,   2.149E+01,   3.633E+01,,    0.924
C,EU-152  ,NO ,   -1.921E+00,   8.566E+00,   1.336E+01,,   -0.144
C,EU-154  ,NO ,   -3.498E+00,   5.718E+00,   9.027E+00,,   -0.387
C,RA-226  ,NO ,   -4.508E+01,   6.773E+01,   1.148E+02,,   -0.393
C,AC-228  ,NO ,   -1.262E+00,   1.057E+01,   1.788E+01,,   -0.071
C,TH-232  ,NO ,   -1.261E+00,   1.057E+01,   1.787E+01,,   -0.071
C,U-235   ,NO ,    1.538E+00,   2.176E+01,   3.478E+01,,    0.044
C,U-238   ,NO ,    2.746E+02,   2.922E+02,   5.149E+02,,    0.533
C,AM-241  ,NO ,   -1.884E+00,   2.442E+01,   4.060E+01,,   -0.046
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Sec. Review: Analyst: KS LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 10-AUG-2006 13:25:11.91
TBE23 03017322 HpGe ********** Aquisition Date/Time: 10-AUG-2006 11:24:56.75

LIMS No., Customer Name, Client ID: WG L29515-4 DRESDEN

Sample ID : 23L29515-4
Sample Type : WG
Quantity : 3.20620E+00 L
Start Channel : 50 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 8-AUG-2006 14:30:00.0
Geometry : 233L082404
BKGFILE : 23BG072806MT
Real Time : 0 02:00:05.02
Live time : 0 02:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	63.06*	28	239	1.33	126.36	1.03E+00	3.87E-03	97.8	0.00E+00
2	0	77.55*	73	362	0.95	155.32	1.55E+00	1.01E-02	49.3	
3	0	92.80*	68	430	1.07	185.78	1.94E+00	9.38E-03	65.3	
4	0	185.89*	35	237	1.23	371.74	2.17E+00	4.90E-03	85.8	
5	0	238.54*	36	184	1.26	476.94	1.90E+00	5.05E-03	69.3	
6	0	241.76	51	159	1.21	483.37	1.88E+00	7.10E-03	43.4	
7	0	295.55*	155	128	1.25	590.86	1.64E+00	2.15E-02	16.9	
8	0	351.78*	211	107	1.48	703.23	1.43E+00	2.93E-02	12.6	
9	0	511.14*	21	62	2.25	1021.79	1.07E+00	2.87E-03	115.2	
10	0	583.14*	47	47	1.22	1165.74	9.71E-01	6.53E-03	35.2	
11	0	609.29*	183	70	1.63	1218.02	9.40E-01	2.54E-02	12.7	
12	0	768.65	66	28	3.36	1536.75	7.96E-01	9.16E-03	22.5	
13	0	911.80*	24	21	1.35	1823.16	7.08E-01	3.30E-03	46.6	
14	0	933.15	26	14	1.10	1865.88	6.97E-01	3.61E-03	34.0	
15	0	1024.35	24	6	4.01	2048.38	6.54E-01	3.33E-03	28.9	
16	0	1033.38	23	3	2.98	2066.46	6.50E-01	3.25E-03	25.3	
17	0	1120.60*	41	17	1.23	2241.04	6.15E-01	5.69E-03	27.6	
18	0	1377.91	25	16	1.95	2756.27	5.32E-01	3.44E-03	39.1	
19	0	1460.98*	5	15	2.52	2922.68	5.10E-01	6.26E-04	276.8	
20	0	1667.67	19	2	1.56	3336.82	4.59E-01	2.57E-03	27.6	
21	0	1763.78*	48	12	1.12	3529.46	4.38E-01	6.73E-03	22.7	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	5	10.67*	5.095E-01	9.709E+00	9.709E+00	553.64
RA-226	186.21	35	3.28*	2.173E+00	5.794E+01	5.794E+01	171.60
AC-228	835.50	------	1.75	7.515E-01	------	Line Not Found	------
	911.07	24	27.70*	7.080E-01	1.418E+01	1.419E+01	93.16
TH-228	238.63	36	44.60*	1.900E+00	5.018E+00	5.028E+00	138.67
	240.98	51	3.95	1.884E+00	8.045E+01	8.061E+01	86.72
TH-232	583.14	47	30.25	9.713E-01	1.874E+01	1.874E+01	70.40
	911.07	24	27.70*	7.080E-01	1.418E+01	1.418E+01	93.16
	969.11	------	16.60	6.793E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L29515-4 Acquisition date : 10-AUG-2006 11:24:56

Total number of lines in spectrum	21	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	6	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.709E+00	9.709E+00	53.75E+00	553.64	
RA-226	1600.00Y	1.00	5.794E+01	5.794E+01	9.942E+01	171.60	
AC-228	5.75Y	1.00	1.418E+01	1.419E+01	1.322E+01	93.16	
TH-228	1.91Y	1.00	5.018E+00	5.028E+00	6.972E+00	138.67	
TH-232	1.41E+10Y	1.00	1.418E+01	1.418E+01	1.321E+01	93.16	
	Total Activity :		1.010E+02	1.010E+02			
	Grand Total Activity :		1.010E+02	1.010E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L29515-4

Acquisition date : 10-AUG-2006 11:24:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	63.06	28	239	1.33	126.36	123	7	3.87E-03	****	1.03E+00	
0	77.55	73	362	0.95	155.32	152	9	1.01E-02	98.6	1.55E+00	
0	92.80	68	430	1.07	185.78	180	12	9.38E-03	****	1.94E+00	
0	295.55	155	128	1.25	590.86	586	12	2.15E-02	33.9	1.64E+00	
0	351.78	211	107	1.48	703.23	697	13	2.93E-02	25.2	1.43E+00	
0	511.14	21	62	2.25	1021.79	1014	16	2.87E-03	****	1.07E+00	
0	609.29	183	70	1.63	1218.02	1209	14	2.54E-02	25.3	9.40E-01	
0	768.65	66	28	3.36	1536.75	1529	17	9.16E-03	45.0	7.96E-01	
0	933.15	26	14	1.10	1865.88	1861	11	3.61E-03	67.9	6.97E-01	
0	1024.35	24	6	4.01	2048.38	2042	12	3.33E-03	57.7	6.54E-01	
0	1033.38	23	3	2.98	2066.46	2061	12	3.25E-03	50.6	6.50E-01	
0	1120.60	41	17	1.23	2241.04	2235	12	5.69E-03	55.1	6.15E-01	
0	1377.91	25	16	1.95	2756.27	2749	13	3.44E-03	78.2	5.32E-01	
0	1667.67	19	2	1.56	3336.82	3333	9	2.57E-03	55.1	4.59E-01	
0	1763.78	48	12	1.12	3529.46	3521	16	6.73E-03	45.5	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	21	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	6	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.709E+00	9.709E+00	53.75E+00	553.64	
RA-226	1600.00Y	1.00	5.794E+01	5.794E+01	9.942E+01	171.60	
TH-228	1.91Y	1.00	5.762E+00	5.773E+00	6.938E+00	120.19	
TH-232	1.41E+10Y	1.00	1.646E+01	1.646E+01	0.933E+01	56.70	
	Total Activity :		8.987E+01	8.988E+01			

Grand Total Activity : 8.987E+01 8.988E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Activity	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)		(pCi/L)		
K-40	9.709E+00	5.375E+01	5.956E+01	0.000E+00	0.163
RA-226	5.794E+01	9.942E+01	1.386E+02	0.000E+00	0.418
TH-228	5.773E+00	6.938E+00	1.042E+01	0.000E+00	0.554
TH-232	1.646E+01	9.335E+00	1.888E+01	0.000E+00	0.872

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.225E+01		2.386E+01	4.084E+01	0.000E+00	-0.300
NA-24	1.475E+01		2.377E+01	4.500E+01	0.000E+00	0.328
CR-51	-1.228E+01		2.815E+01	4.654E+01	0.000E+00	-0.264
MN-54	2.445E+00		2.921E+00	5.589E+00	0.000E+00	0.438
CO-57	1.918E+00		3.365E+00	5.895E+00	0.000E+00	0.325
CO-58	2.121E+00		2.983E+00	5.633E+00	0.000E+00	0.376
FE-59	3.404E+00		6.325E+00	1.200E+01	0.000E+00	0.284
CO-60	6.823E-01		3.147E+00	5.898E+00	0.000E+00	0.116
ZN-65	-3.032E+00		7.373E+00	1.070E+01	0.000E+00	-0.283
SE-75	-1.309E+00		4.193E+00	7.024E+00	0.000E+00	-0.186
SR-85	7.425E+00		3.613E+00	6.464E+00	0.000E+00	1.149
Y-88	1.448E+00		2.752E+00	5.790E+00	0.000E+00	0.250
NB-94	2.137E+00		3.028E+00	5.643E+00	0.000E+00	0.379
NB-95	3.564E+00		3.932E+00	6.529E+00	0.000E+00	0.546
ZR-95	-1.626E+00		5.346E+00	9.161E+00	0.000E+00	-0.177
MO-99	-6.542E+00		3.598E+01	6.250E+01	0.000E+00	-0.105
RU-103	-1.028E+00		3.077E+00	5.322E+00	0.000E+00	-0.193
RU-106	-4.033E+00		3.014E+01	5.256E+01	0.000E+00	-0.077
AG-110m	-1.535E+00		2.934E+00	4.948E+00	0.000E+00	-0.310
SN-113	-2.128E-01		4.284E+00	7.229E+00	0.000E+00	-0.029
SB-124	-1.490E+00		3.506E+00	5.045E+00	0.000E+00	-0.295
SB-125	-2.043E-01		8.624E+00	1.530E+01	0.000E+00	-0.013
TE-129M	-7.583E+00		3.554E+01	6.209E+01	0.000E+00	-0.122
I-131	3.857E-01		3.613E+00	6.194E+00	0.000E+00	0.062
BA-133	2.720E+00		4.650E+00	7.223E+00	0.000E+00	0.377
CS-134	-3.803E-01		3.229E+00	4.845E+00	0.000E+00	-0.078
CS-136	-2.141E+00		3.171E+00	5.200E+00	0.000E+00	-0.412
CS-137	-2.207E+00		3.151E+00	5.220E+00	0.000E+00	-0.423
CE-139	-5.047E-01		3.270E+00	5.563E+00	0.000E+00	-0.091
BA-140	-9.123E+00		1.122E+01	1.860E+01	0.000E+00	-0.490
LA-140	7.572E-02		3.951E+00	7.205E+00	0.000E+00	0.011
CE-141	1.382E+00		5.796E+00	1.002E+01	0.000E+00	0.138
CE-144	2.156E+00		2.531E+01	4.360E+01	0.000E+00	0.049
EU-152	-3.637E+00		1.132E+01	1.692E+01	0.000E+00	-0.215
EU-154	4.459E+00		7.070E+00	1.241E+01	0.000E+00	0.359
AC-228	1.419E+01		1.322E+01	2.277E+01	0.000E+00	0.623
U-235	-2.439E+01		2.649E+01	4.384E+01	0.000E+00	-0.556
U-238	-1.581E+01		3.062E+02	5.749E+02	0.000E+00	-0.028
AM-241	3.118E+00		1.992E+01	2.923E+01	0.000E+00	0.107

```
A,23L29515-4       ,08/10/2006 13:25,08/08/2006 14:30,   3.206E+00,WG L29515-4 DR
B,23L29515-4       ,LIBD                ,08/07/2006 09:53,233L082404
C,K-40     ,YES,    9.709E+00,   5.375E+01,   5.956E+01,,    0.163
C,RA-226   ,YES,    5.794E+01,   9.942E+01,   1.386E+02,,    0.418
C,TH-228   ,YES,    5.773E+00,   6.938E+00,   1.042E+01,,    0.554
C,TH-232   ,YES,    1.646E+01,   9.335E+00,   1.888E+01,,    0.872
C,BE-7     ,NO ,   -1.225E+01,   2.386E+01,   4.084E+01,,   -0.300
C,NA-24    ,NO ,    1.475E+01,   2.377E+01,   4.500E+01,,    0.328
C,CR-51    ,NO ,   -1.228E+01,   2.815E+01,   4.654E+01,,   -0.264
C,MN-54    ,NO ,    2.445E+00,   2.921E+00,   5.589E+00,,    0.438
C,CO-57    ,NO ,    1.918E+00,   3.365E+00,   5.895E+00,,    0.325
C,CO-58    ,NO ,    2.121E+00,   2.983E+00,   5.633E+00,,    0.376
C,FE-59    ,NO ,    3.404E+00,   6.325E+00,   1.200E+01,,    0.284
C,CO-60    ,NO ,    6.823E-01,   3.147E+00,   5.898E+00,,    0.116
C,ZN-65    ,NO ,   -3.032E+00,   7.373E+00,   1.070E+01,,   -0.283
C,SE-75    ,NO ,   -1.309E+00,   4.193E+00,   7.024E+00,,   -0.186
C,SR-85    ,NO ,    7.425E+00,   3.613E+00,   6.464E+00,,    1.149
C,Y-88     ,NO ,    1.448E+00,   2.752E+00,   5.790E+00,,    0.250
C,NB-94    ,NO ,    2.137E+00,   3.028E+00,   5.643E+00,,    0.379
C,NB-95    ,NO ,    3.564E+00,   3.932E+00,   6.529E+00,,    0.546
C,ZR-95    ,NO ,   -1.626E+00,   5.346E+00,   9.161E+00,,   -0.177
C,MO-99    ,NO ,   -6.542E+00,   3.598E+01,   6.250E+01,,   -0.105
C,RU-103   ,NO ,   -1.028E+00,   3.077E+00,   5.322E+00,,   -0.193
C,RU-106   ,NO ,   -4.033E+00,   3.014E+01,   5.256E+01,,   -0.077
C,AG-110m  ,NO ,   -1.535E+00,   2.934E+00,   4.948E+00,,   -0.310
C,SN-113   ,NO ,   -2.128E-01,   4.284E+00,   7.229E+00,,   -0.029
C,SB-124   ,NO ,   -1.490E+00,   3.506E+00,   5.045E+00,,   -0.295
C,SB-125   ,NO ,   -2.043E-01,   8.624E+00,   1.530E+01,,   -0.013
C,TE-129M  ,NO ,   -7.583E+00,   3.554E+01,   6.209E+01,,   -0.122
C,I-131    ,NO ,    3.857E-01,   3.613E+00,   6.194E+00,,    0.062
C,BA-133   ,NO ,    2.720E+00,   4.650E+00,   7.223E+00,,    0.377
C,CS-134   ,NO ,   -3.803E-01,   3.229E+00,   4.845E+00,,   -0.078
C,CS-136   ,NO ,   -2.141E+00,   3.171E+00,   5.200E+00,,   -0.412
C,CS-137   ,NO ,   -2.207E+00,   3.151E+00,   5.220E+00,,   -0.423
C,CE-139   ,NO ,   -5.047E-01,   3.270E+00,   5.563E+00,,   -0.091
C,BA-140   ,NO ,   -9.123E+00,   1.122E+01,   1.860E+01,,   -0.490
C,LA-140   ,NO ,    7.572E-02,   3.951E+00,   7.205E+00,,    0.011
C,CE-141   ,NO ,    1.382E+00,   5.796E+00,   1.002E+01,,    0.138
C,CE-144   ,NO ,    2.156E+00,   2.531E+01,   4.360E+01,,    0.049
C,EU-152   ,NO ,   -3.637E+00,   1.132E+01,   1.692E+01,,   -0.215
C,EU-154   ,NO ,    4.459E+00,   7.070E+00,   1.241E+01,,    0.359
C,AC-228   ,NO ,    1.419E+01,   1.322E+01,   2.277E+01,,    0.623
C,U-235    ,NO ,   -2.439E+01,   2.649E+01,   4.384E+01,,   -0.556
C,U-238    ,NO ,   -1.581E+01,   3.062E+02,   5.749E+02,,   -0.028
C,AM-241   ,NO ,    3.118E+00,   1.992E+01,   2.923E+01,,    0.107
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 10-AUG-2006 17:56:14.16
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 10-AUG-2006 15:39:47.66

LIMS No., Customer Name, Client ID: WG L29515-5 DRESDEN

Sample ID	: 07L29515-5			Smple Date	: 8-AUG-2006 14:40:00.0
Sample Type	: WG			Geometry	: 0735L090904
Quantity	: 3.25740E+00 L			BKGFILE	: 07BG072806MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 02:16:15.62
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 02:16:13.95
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	140.02*	83	233	1.58	281.23	2.09E+00	1.02E-02	37.2	1.71E+00
2	1	351.77*	53	82	1.01	705.25	1.43E+00	6.44E-03	36.3	3.14E+00
3	1	595.56	46	53	1.84	1193.28	9.97E-01	5.61E-03	32.8	2.32E+00
4	1	608.95*	103	49	2.19	1220.08	9.81E-01	1.26E-02	19.1	1.98E+00
5	1	1121.42	59	22	0.91	2245.57	6.25E-01	7.16E-03	23.9	2.21E+01
6	1	1460.71*	23	15	2.64	2924.20	5.15E-01	2.84E-03	55.5	1.31E+00
7	1	1765.16*	18	15	2.32	3532.94	4.54E-01	2.24E-03	53.4	7.28E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	23	10.67*	5.151E-01	4.291E+01	4.291E+01	111.04

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29515-5 Acquisition date : 10-AUG-2006 15:39:47

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.291E+01	4.291E+01	4.765E+01	111.04	
	Total Activity :		4.291E+01	4.291E+01			
	Grand Total Activity :		4.291E+01	4.291E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L29515-5 Acquisition date : 10-AUG-2006 15:39:47

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	140.02	83	233	1.58	281.23	276	10	1.02E-02	74.5	2.09E+00	
1	351.77	53	82	1.01	705.25	702	8	6.44E-03	72.6	1.43E+00	
1	595.56	46	53	1.84	1193.28	1188	10	5.61E-03	65.6	9.97E-01	
1	608.95	103	49	2.19	1220.08	1213	15	1.26E-02	38.3	9.81E-01	
1	1121.42	59	22	0.91	2245.57	2239	18	7.16E-03	47.9	6.25E-01	
1	1765.16	18	15	2.32	3532.94	3527	11	2.24E-03	****	4.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.291E+01	4.291E+01	4.765E+01	111.04	
	Total Activity :		4.291E+01	4.291E+01			
	Grand Total Activity :		4.291E+01	4.291E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.291E+01	4.765E+01	3.541E+01	0.000E+00	1.212

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-3.730E+00		2.054E+01	3.223E+01	0.000E+00	-0.116
NA-24	8.411E+00		2.294E+01	3.964E+01	0.000E+00	0.212
CR-51	1.509E+01		2.099E+01	3.612E+01	0.000E+00	0.418
MN-54	2.271E+00		2.533E+00	4.489E+00	0.000E+00	0.506
CO-57	1.878E+00		2.194E+00	3.714E+00	0.000E+00	0.506

CO-58	-9.852E-01	2.502E+00	3.883E+00	0.000E+00	-0.254
FE-59	3.421E+00	4.909E+00	8.771E+00	0.000E+00	0.390
CO-60	2.315E+00	2.824E+00	5.092E+00	0.000E+00	0.455
ZN-65	-4.245E-01	6.425E+00	9.054E+00	0.000E+00	-0.047
SE-75	8.250E-01	3.122E+00	5.271E+00	0.000E+00	0.157
SR-85	-6.192E+00	3.179E+00	4.743E+00	0.000E+00	-1.305
Y-88	6.635E-01	2.400E+00	4.163E+00	0.000E+00	0.159
NB-94	-2.296E+00	2.325E+00	3.425E+00	0.000E+00	-0.670
NB-95	1.489E-02	2.405E+00	3.926E+00	0.000E+00	0.004
ZR-95	8.903E-01	4.134E+00	6.912E+00	0.000E+00	0.129
MO-99	-1.866E+01	2.868E+01	4.336E+01	0.000E+00	-0.430
RU-103	-3.197E+00	2.413E+00	3.618E+00	0.000E+00	-0.884
RU-106	5.493E+00	2.155E+01	3.659E+01	0.000E+00	0.150
AG-110m	-3.210E-01	2.333E+00	3.800E+00	0.000E+00	-0.084
SN-113	1.605E+00	2.874E+00	4.878E+00	0.000E+00	0.329
SB-124	-1.712E+00	2.843E+00	3.792E+00	0.000E+00	-0.451
SB-125	1.380E+00	6.702E+00	1.099E+01	0.000E+00	0.126
TE-129M	1.132E+00	2.710E+01	4.357E+01	0.000E+00	0.026
I-131	-8.189E-01	2.924E+00	4.659E+00	0.000E+00	-0.176
BA-133	1.136E+00	3.384E+00	5.016E+00	0.000E+00	0.226
CS-134	-1.346E+00	2.583E+00	3.462E+00	0.000E+00	-0.389
CS-136	1.709E+00	2.655E+00	4.613E+00	0.000E+00	0.370
CS-137	2.595E+00	2.732E+00	4.891E+00	0.000E+00	0.531
CE-139	1.953E-01	2.377E+00	3.792E+00	0.000E+00	0.051
BA-140	3.906E+00	9.353E+00	1.621E+01	0.000E+00	0.241
LA-140	-3.849E-02	3.106E+00	5.175E+00	0.000E+00	-0.007
CE-141	4.628E-01	3.935E+00	6.336E+00	0.000E+00	0.073
CE-144	-5.040E+00	1.810E+01	2.863E+01	0.000E+00	-0.176
EU-152	-4.537E+00	6.976E+00	1.081E+01	0.000E+00	-0.420
EU-154	-2.830E+00	4.725E+00	7.360E+00	0.000E+00	-0.385
RA-226	-4.123E+00	6.051E+01	1.067E+02	0.000E+00	-0.039
AC-228	2.845E-01	1.107E+01	1.934E+01	0.000E+00	0.015
TH-228	-1.098E+00	4.625E+00	8.058E+00	0.000E+00	-0.136
TH-232	2.843E-01	1.106E+01	1.933E+01	0.000E+00	0.015
U-235	-3.591E+00	1.964E+01	2.782E+01	0.000E+00	-0.129
U-238	-1.656E+02	2.663E+02	4.063E+02	0.000E+00	-0.408
AM-241	-3.079E+00	2.136E+01	3.534E+01	0.000E+00	-0.087

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A,07L29515-5      ,08/10/2006 17:56,08/08/2006 14:40,   3.257E+00,WG L29515-5 DR
B,07L29515-5      ,LIBD                ,08/07/2006 09:38,0735L090904
C,K-40    ,YES,    4.291E+01,   4.765E+01,   3.541E+01,,    1.212
C,BE-7    ,NO ,   -3.730E+00,   2.054E+01,   3.223E+01,,   -0.116
C,NA-24   ,NO ,    8.411E+00,   2.294E+01,   3.964E+01,,    0.212
C,CR-51   ,NO ,    1.509E+01,   2.099E+01,   3.612E+01,,    0.418
C,MN-54   ,NO ,    2.271E+00,   2.533E+00,   4.489E+00,,    0.506
C,CO-57   ,NO ,    1.878E+00,   2.194E+00,   3.714E+00,,    0.506
C,CO-58   ,NO ,   -9.852E-01,   2.502E+00,   3.883E+00,,   -0.254
C,FE-59   ,NO ,    3.421E+00,   4.909E+00,   8.771E+00,,    0.390
C,CO-60   ,NO ,    2.315E+00,   2.824E+00,   5.092E+00,,    0.455
C,ZN-65   ,NO ,   -4.245E-01,   6.425E+00,   9.054E+00,,   -0.047
C,SE-75   ,NO ,    8.250E-01,   3.122E+00,   5.271E+00,,    0.157
C,SR-85   ,NO ,   -6.192E+00,   3.179E+00,   4.743E+00,,   -1.305
C,Y-88    ,NO ,    6.635E-01,   2.400E+00,   4.163E+00,,    0.159
C,NB-94   ,NO ,   -2.296E+00,   2.325E+00,   3.425E+00,,   -0.670
C,NB-95   ,NO ,    1.489E-02,   2.405E+00,   3.926E+00,,    0.004
C,ZR-95   ,NO ,    8.903E-01,   4.134E+00,   6.912E+00,,    0.129
C,MO-99   ,NO ,   -1.866E+01,   2.868E+01,   4.336E+01,,   -0.430
C,RU-103  ,NO ,   -3.197E+00,   2.413E+00,   3.618E+00,,   -0.884
C,RU-106  ,NO ,    5.493E+00,   2.155E+01,   3.659E+01,,    0.150
C,AG-110m ,NO ,   -3.210E-01,   2.333E+00,   3.800E+00,,   -0.084
C,SN-113  ,NO ,    1.605E+00,   2.874E+00,   4.878E+00,,    0.329
C,SB-124  ,NO ,   -1.712E+00,   2.843E+00,   3.792E+00,,   -0.451
C,SB-125  ,NO ,    1.380E+00,   6.702E+00,   1.099E+01,,    0.126
C,TE-129M ,NO ,    1.132E+00,   2.710E+01,   4.357E+01,,    0.026
C,I-131   ,NO ,   -8.189E-01,   2.924E+00,   4.659E+00,,   -0.176
C,BA-133  ,NO ,    1.136E+00,   3.384E+00,   5.016E+00,,    0.226
C,CS-134  ,NO ,   -1.346E+00,   2.583E+00,   3.462E+00,,   -0.389
C,CS-136  ,NO ,    1.709E+00,   2.655E+00,   4.613E+00,,    0.370
C,CS-137  ,NO ,    2.595E+00,   2.732E+00,   4.891E+00,,    0.531
C,CE-139  ,NO ,    1.953E-01,   2.377E+00,   3.792E+00,,    0.051
C,BA-140  ,NO ,    3.906E+00,   9.353E+00,   1.621E+01,,    0.241
C,LA-140  ,NO ,   -3.849E-02,   3.106E+00,   5.175E+00,,   -0.007
C,CE-141  ,NO ,    4.628E-01,   3.935E+00,   6.336E+00,,    0.073
C,CE-144  ,NO ,   -5.040E+00,   1.810E+01,   2.863E+01,,   -0.176
C,EU-152  ,NO ,   -4.537E+00,   6.976E+00,   1.081E+01,,   -0.420
C,EU-154  ,NO ,   -2.830E+00,   4.725E+00,   7.360E+00,,   -0.385
C,RA-226  ,NO ,   -4.123E+00,   6.051E+01,   1.067E+02,,   -0.039
C,AC-228  ,NO ,    2.845E-01,   1.107E+01,   1.934E+01,,    0.015
C,TH-228  ,NO ,   -1.098E+00,   4.625E+00,   8.058E+00,,   -0.136
C,TH-232  ,NO ,    2.843E-01,   1.106E+01,   1.933E+01,,    0.015
C,U-235   ,NO ,   -3.591E+00,   1.964E+01,   2.782E+01,,   -0.129
C,U-238   ,NO ,   -1.656E+02,   2.663E+02,   4.063E+02,,   -0.408
C,AM-241  ,NO ,   -3.079E+00,   2.136E+01,   3.534E+01,,   -0.087
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 10-AUG-2006 17:54:40.04
TBE23 03017322 HpGe ********** Aquisition Date/Time: 10-AUG-2006 15:39:55.82

LIMS No., Customer Name, Client ID: WG L29515-6 DRESDEN

Sample ID : 23L29515-6
Sample Type : WG
Quantity : 3.22790E+00 L
Start Channel : 50 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 8-AUG-2006 16:50:00.0
Geometry : 233L082404
BKGFILE : 23BG072806MT
Real Time : 0 02:14:33.26
Live time : 0 02:14:27.75

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	6	33.80*	20	21	1.39	67.94	8.27E-02	2.48E-03	88.0	1.29E+00
2	6	35.96*	62	99	1.86	72.25	1.18E-01	7.62E-03	42.0	
3	6	38.51*	8	116	1.48	77.33	1.70E-01	1.00E-03	223.3	
4	0	41.13	27	136	0.65	82.56	2.35E-01	3.34E-03	70.8	
5	0	66.17	63	275	1.43	132.58	1.15E+00	7.77E-03	45.7	
6	0	92.54*	22	302	0.96	185.26	1.94E+00	2.73E-03	144.7	
7	0	139.85*	77	315	0.89	279.76	2.32E+00	9.50E-03	42.3	
8	0	186.19*	38	292	1.03	372.35	2.17E+00	4.76E-03	89.9	
9	4	238.57*	46	173	1.34	477.00	1.90E+00	5.69E-03	53.5	9.15E-01
10	4	242.33	88	228	1.82	484.51	1.88E+00	1.09E-02	35.1	
11	0	295.21*	48	167	1.10	590.18	1.64E+00	5.92E-03	50.0	
12	0	351.42*	131	167	1.30	702.52	1.44E+00	1.62E-02	22.5	
13	0	584.39	23	52	1.51	1168.23	9.70E-01	2.80E-03	67.7	
14	0	609.33*	128	64	1.44	1218.11	9.40E-01	1.59E-02	16.5	
15	0	969.94	19	28	0.85	1939.49	6.79E-01	2.29E-03	59.6	
16	0	1120.50*	40	17	1.92	2240.84	6.16E-01	4.94E-03	29.6	
17	0	1461.05*	54	4	2.16	2922.82	5.10E-01	6.65E-03	24.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	54	10.67*	5.095E-01	1.025E+02	1.025E+02	49.00
RA-226	186.21	38	3.28*	2.172E+00	5.594E+01	5.594E+01	179.83
TH-228	238.63	46	44.60*	1.900E+00	5.618E+00	5.629E+00	106.92
	240.98	------	3.95	1.888E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L29515-6 Acquisition date : 10-AUG-2006 15:39:55

Total number of lines in spectrum	17	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	4	23.53%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.025E+02	1.025E+02	0.502E+02	49.00	
RA-226	1600.00Y	1.00	5.594E+01	5.594E+01	10.06E+01	179.83	
TH-228	1.91Y	1.00	5.618E+00	5.629E+00	6.019E+00	106.92	
	Total Activity :		1.640E+02	1.640E+02			
	Grand Total Activity :		1.640E+02	1.640E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L29515-6 Acquisition date : 10-AUG-2006 15:39:55

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	33.80	20	21	1.39	67.94	64	17	2.48E-03	****	8.27E-02	
6	35.96	62	99	1.86	72.25	64	17	7.62E-03	84.1	1.18E-01	
6	38.51	8	116	1.48	77.33	64	17	1.00E-03	****	1.70E-01	
0	41.13	27	136	0.65	82.56	81	6	3.34E-03	****	2.35E-01	
0	66.17	63	275	1.43	132.58	130	7	7.77E-03	91.4	1.15E+00	
0	92.54	22	302	0.96	185.26	182	7	2.73E-03	****	1.94E+00	
0	139.85	77	315	0.89	279.76	276	8	9.50E-03	84.7	2.32E+00	
4	242.33	88	228	1.82	484.51	470	21	1.09E-02	70.2	1.88E+00	
0	295.21	48	167	1.10	590.18	587	8	5.92E-03	****	1.64E+00	
0	351.42	131	167	1.30	702.52	698	13	1.62E-02	45.1	1.44E+00	
0	584.39	23	52	1.51	1168.23	1160	11	2.80E-03	****	9.70E-01	
0	609.33	128	64	1.44	1218.11	1212	13	1.59E-02	33.0	9.40E-01	
0	969.94	19	28	0.85	1939.49	1932	11	2.29E-03	****	6.79E-01	T
0	1120.50	40	17	1.92	2240.84	2234	13	4.94E-03	59.2	6.16E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	17	
Number of unidentified lines	13	
Number of lines tentatively identified by NID	4	23.53%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.025E+02	1.025E+02	0.502E+02	49.00	
RA-226	1600.00Y	1.00	5.594E+01	5.594E+01	10.06E+01	179.83	
TH-228	1.91Y	1.00	5.618E+00	5.629E+00	6.019E+00	106.92	
	Total Activity :		1.640E+02	1.640E+02			
	Grand Total Activity :		1.640E+02	1.640E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.025E+02	5.021E+01	3.575E+01	0.000E+00	2.866
RA-226	5.594E+01	1.006E+02	1.027E+02	0.000E+00	0.544
TH-228	5.629E+00	6.019E+00	7.946E+00	0.000E+00	0.708

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-5.590E+00		2.164E+01	3.665E+01	0.000E+00	-0.153
NA-24	2.080E-01		1.903E+01	3.568E+01	0.000E+00	0.006
CR-51	1.891E+01		2.204E+01	4.019E+01	0.000E+00	0.470
MN-54	-8.889E-01		2.403E+00	4.210E+00	0.000E+00	-0.211
CO-57	8.595E-01		2.528E+00	4.489E+00	0.000E+00	0.191
CO-58	1.354E+00		2.327E+00	4.502E+00	0.000E+00	0.301
FE-59	-1.489E+00		4.462E+00	7.796E+00	0.000E+00	-0.191
CO-60	7.940E-01		2.442E+00	4.681E+00	0.000E+00	0.170
ZN-65	-3.187E+00		5.476E+00	7.675E+00	0.000E+00	-0.415
SE-75	2.528E+00		3.512E+00	6.314E+00	0.000E+00	0.400
SR-85	-1.084E+01		3.369E+00	4.437E+00	0.000E+00	-2.442
Y-88	5.785E-01		2.187E+00	4.519E+00	0.000E+00	0.128
NB-94	1.337E+00		2.229E+00	4.293E+00	0.000E+00	0.311
NB-95	-1.103E+00		2.461E+00	4.285E+00	0.000E+00	-0.257
ZR-95	-1.888E+00		4.069E+00	7.099E+00	0.000E+00	-0.266
MO-99	1.203E+01		2.942E+01	5.576E+01	0.000E+00	0.216
RU-103	-1.509E+00		2.645E+00	4.346E+00	0.000E+00	-0.347
RU-106	-3.056E+01		2.491E+01	3.751E+01	0.000E+00	-0.815
AG-110m	3.085E+00		2.358E+00	4.775E+00	0.000E+00	0.646
SN-113	1.803E+00		3.048E+00	5.546E+00	0.000E+00	0.325
SB-124	-3.160E+00		2.828E+00	3.880E+00	0.000E+00	-0.814
SB-125	4.634E-01		7.365E+00	1.282E+01	0.000E+00	0.036
TE-129M	-1.052E+01		2.845E+01	4.783E+01	0.000E+00	-0.220
I-131	1.390E+00		2.718E+00	4.927E+00	0.000E+00	0.282
BA-133	-3.775E+00		4.124E+00	5.711E+00	0.000E+00	-0.661
CS-134	-2.908E-01		2.529E+00	3.767E+00	0.000E+00	-0.077
CS-136	7.903E-01		2.132E+00	4.137E+00	0.000E+00	0.191
CS-137	-1.955E+00		2.500E+00	4.241E+00	0.000E+00	-0.461
CE-139	6.134E-01		2.558E+00	4.504E+00	0.000E+00	0.136
BA-140	-3.470E+00		9.880E+00	1.655E+01	0.000E+00	-0.210
LA-140	7.106E-01		2.839E+00	5.644E+00	0.000E+00	0.126
CE-141	2.756E+00		4.607E+00	7.987E+00	0.000E+00	0.345
CE-144	-5.044E+00		1.872E+01	3.249E+01	0.000E+00	-0.155
EU-152	-3.726E+00		7.712E+00	1.295E+01	0.000E+00	-0.288
EU-154	2.888E+00		5.285E+00	9.455E+00	0.000E+00	0.305
AC-228	3.243E+00		1.042E+01	1.985E+01	0.000E+00	0.163
TH-232	3.241E+00		1.041E+01	1.984E+01	0.000E+00	0.163
U-235	-4.018E+00		2.332E+01	3.568E+01	0.000E+00	-0.113
U-238	-1.037E+02		2.461E+02	4.450E+02	0.000E+00	-0.233
AM-241	-4.255E+00		1.481E+01	2.437E+01	0.000E+00	-0.175

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A,23L29515-6      ,08/10/2006 17:54,08/08/2006 16:50,   3.228E+00,WG L29515-6 DR
B,23L29515-6      ,LIBD                ,08/07/2006 09:53,233L082404
C,K-40    ,YES,   1.025E+02,   5.021E+01,   3.575E+01,,    2.866
C,RA-226  ,YES,   5.594E+01,   1.006E+02,   1.027E+02,,    0.544
C,TH-228  ,YES,   5.629E+00,   6.019E+00,   7.946E+00,,    0.708
C,BE-7    ,NO ,  -5.590E+00,   2.164E+01,   3.665E+01,,   -0.153
C,NA-24   ,NO ,   2.080E-01,   1.903E+01,   3.568E+01,,    0.006
C,CR-51   ,NO ,   1.891E+01,   2.204E+01,   4.019E+01,,    0.470
C,MN-54   ,NO ,  -8.889E-01,   2.403E+00,   4.210E+00,,   -0.211
C,CO-57   ,NO ,   8.595E-01,   2.528E+00,   4.489E+00,,    0.191
C,CO-58   ,NO ,   1.354E+00,   2.327E+00,   4.502E+00,,    0.301
C,FE-59   ,NO ,  -1.489E+00,   4.462E+00,   7.796E+00,,   -0.191
C,CO-60   ,NO ,   7.940E-01,   2.442E+00,   4.681E+00,,    0.170
C,ZN-65   ,NO ,  -3.187E+00,   5.476E+00,   7.675E+00,,   -0.415
C,SE-75   ,NO ,   2.528E+00,   3.512E+00,   6.314E+00,,    0.400
C,SR-85   ,NO ,  -1.084E+01,   3.369E+00,   4.437E+00,,   -2.442
C,Y-88    ,NO ,   5.785E-01,   2.187E+00,   4.519E+00,,    0.128
C,NB-94   ,NO ,   1.337E+00,   2.229E+00,   4.293E+00,,    0.311
C,NB-95   ,NO ,  -1.103E+00,   2.461E+00,   4.285E+00,,   -0.257
C,ZR-95   ,NO ,  -1.888E+00,   4.069E+00,   7.099E+00,,   -0.266
C,MO-99   ,NO ,   1.203E+01,   2.942E+01,   5.576E+01,,    0.216
C,RU-103  ,NO ,  -1.509E+00,   2.645E+00,   4.346E+00,,   -0.347
C,RU-106  ,NO ,  -3.056E+01,   2.491E+01,   3.751E+01,,   -0.815
C,AG-110m ,NO ,   3.085E+00,   2.358E+00,   4.775E+00,,    0.646
C,SN-113  ,NO ,   1.803E+00,   3.048E+00,   5.546E+00,,    0.325
C,SB-124  ,NO ,  -3.160E+00,   2.828E+00,   3.880E+00,,   -0.814
C,SB-125  ,NO ,   4.634E-01,   7.365E+00,   1.282E+01,,    0.036
C,TE-129M ,NO ,  -1.052E+01,   2.845E+01,   4.783E+01,,   -0.220
C,I-131   ,NO ,   1.390E+00,   2.718E+00,   4.927E+00,,    0.282
C,BA-133  ,NO ,  -3.775E+00,   4.124E+00,   5.711E+00,,   -0.661
C,CS-134  ,NO ,  -2.908E-01,   2.529E+00,   3.767E+00,,   -0.077
C,CS-136  ,NO ,   7.903E-01,   2.132E+00,   4.137E+00,,    0.191
C,CS-137  ,NO ,  -1.955E+00,   2.500E+00,   4.241E+00,,   -0.461
C,CE-139  ,NO ,   6.134E-01,   2.558E+00,   4.504E+00,,    0.136
C,BA-140  ,NO ,  -3.470E+00,   9.880E+00,   1.655E+01,,   -0.210
C,LA-140  ,NO ,   7.106E-01,   2.839E+00,   5.644E+00,,    0.126
C,CE-141  ,NO ,   2.756E+00,   4.607E+00,   7.987E+00,,    0.345
C,CE-144  ,NO ,  -5.044E+00,   1.872E+01,   3.249E+01,,   -0.155
C,EU-152  ,NO ,  -3.726E+00,   7.712E+00,   1.295E+01,,   -0.288
C,EU-154  ,NO ,   2.888E+00,   5.285E+00,   9.455E+00,,    0.305
C,AC-228  ,NO ,   3.243E+00,   1.042E+01,   1.985E+01,,    0.163
C,TH-232  ,NO ,   3.241E+00,   1.041E+01,   1.984E+01,,    0.163
C,U-235   ,NO ,  -4.018E+00,   2.332E+01,   3.568E+01,,   -0.113
C,U-238   ,NO ,  -1.037E+02,   2.461E+02,   4.450E+02,,   -0.233
C,AM-241  ,NO ,  -4.255E+00,   1.481E+01,   2.437E+01,,   -0.175
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 09:17:45.73
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 10-AUG-2006 18:10:10.68

LIMS No., Customer Name, Client ID: L29515-7 WG EX/DRES

Sample ID	: 15L29515-7		Smple Date: 8-AUG-2006 16:10:00.0
Sample Type	: WG		Geometry : 153L082604
Quantity	: 2.85280E+00 L		BKGFILE : 15BG072806MT
Start Channel	: 40	Energy Tol : 1.00000	Real Time : 0 08:00:03.17
End Channel	: 4090	Pk Srch Sens: 5.00000	Live time : 0 08:00:00.00
MDA Constant	: 0.00	Library Used: LIBD	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.69*	94	791	1.17	120.80	5.05E-01	3.27E-03	53.5	1.11E+00
2	1	140.04*	194	876	1.65	268.44	1.66E+00	6.73E-03	29.3	2.05E+00
3	1	295.26*	221	455	1.58	580.83	1.18E+00	7.67E-03	21.2	2.56E+00
4	1	351.53*	279	344	1.43	694.07	1.02E+00	9.70E-03	15.2	3.16E+00
5	1	595.72	92	185	1.79	1185.29	6.54E-01	3.18E-03	30.6	5.43E-01
6	1	608.62*	192	328	1.59	1211.22	6.43E-01	6.66E-03	24.9	1.06E+00
7	1	1460.90*	57	45	3.11	2924.08	3.23E-01	1.98E-03	40.4	1.26E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	57	10.67*	3.225E-01	5.458E+01	5.458E+01	80.76

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 15L29515-7 Acquisition date : 10-AUG-2006 18:10:10

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.458E+01	5.458E+01	4.408E+01	80.76	
	Total Activity :		5.458E+01	5.458E+01			
	Grand Total Activity :		5.458E+01	5.458E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 15L29515-7

Acquisition date : 10-AUG-2006 18:10:10

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.69	94	791	1.17	120.80	118	7	3.27E-03	****	5.05E-01	
1	140.04	194	876	1.65	268.44	264	9	6.73E-03	58.6	1.66E+00	
1	295.26	221	455	1.58	580.83	576	11	7.67E-03	42.4	1.18E+00	
1	351.53	279	344	1.43	694.07	690	10	9.70E-03	30.5	1.02E+00	
1	595.72	92	185	1.79	1185.29	1180	11	3.18E-03	61.2	6.54E-01	
1	608.62	192	328	1.59	1211.22	1202	18	6.66E-03	49.8	6.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.458E+01	5.458E+01	4.408E+01	80.76	
Total Activity :			5.458E+01	5.458E+01			
Grand Total Activity :			5.458E+01	5.458E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.458E+01	4.408E+01	3.093E+01	0.000E+00	1.765

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.758E+01		1.722E+01	3.010E+01	0.000E+00	0.584
NA-24	9.001E-01		2.375E+01	3.964E+01	0.000E+00	0.023
CR-51	-9.052E+00		1.762E+01	2.774E+01	0.000E+00	-0.326
MN-54	5.997E-03		2.098E+00	3.424E+00	0.000E+00	0.002
CO-57	1.601E+00		1.966E+00	3.320E+00	0.000E+00	0.482

CO-58	1.036E+00	2.049E+00	3.459E+00	0.000E+00	0.300
FE-59	-3.765E+00	4.065E+00	6.032E+00	0.000E+00	-0.624
CO-60	-3.848E-01	2.062E+00	3.378E+00	0.000E+00	-0.114
ZN-65	-1.172E+01	5.073E+00	6.690E+00	0.000E+00	-1.752
SE-75	3.412E+00	2.678E+00	4.522E+00	0.000E+00	0.755
SR-85	-1.149E+01	2.520E+00	3.485E+00	0.000E+00	-3.297
Y-88	-1.723E-01	2.226E+00	3.605E+00	0.000E+00	-0.048
NB-94	1.120E+00	1.996E+00	3.389E+00	0.000E+00	0.330
NB-95	4.093E-01	2.026E+00	3.362E+00	0.000E+00	0.122
ZR-95	-2.835E-01	3.433E+00	5.599E+00	0.000E+00	-0.051
MO-99	-1.046E+00	2.525E+01	4.134E+01	0.000E+00	-0.025
RU-103	1.097E+00	2.010E+00	3.445E+00	0.000E+00	0.318
RU-106	-6.888E+00	1.831E+01	2.965E+01	0.000E+00	-0.232
AG-110m	4.924E-01	2.018E+00	3.377E+00	0.000E+00	0.146
SN-113	7.713E-01	2.542E+00	4.338E+00	0.000E+00	0.178
SB-124	-7.551E-01	2.467E+00	3.261E+00	0.000E+00	-0.232
SB-125	-2.235E+00	5.730E+00	9.475E+00	0.000E+00	-0.236
TE-129M	-6.203E+00	2.340E+01	3.877E+01	0.000E+00	-0.160
I-131	1.345E+00	2.455E+00	4.022E+00	0.000E+00	0.334
BA-133	1.867E+00	3.149E+00	4.552E+00	0.000E+00	0.410
CS-134	2.738E+00	2.204E+00	3.458E+00	0.000E+00	0.792
CS-136	5.690E-01	2.140E+00	3.560E+00	0.000E+00	0.160
CS-137	-1.500E-01	2.238E+00	3.679E+00	0.000E+00	-0.041
CE-139	-5.511E-01	1.891E+00	3.083E+00	0.000E+00	-0.179
BA-140	3.237E+00	7.909E+00	1.344E+01	0.000E+00	0.241
LA-140	-8.374E-03	2.352E+00	3.877E+00	0.000E+00	-0.002
CE-141	1.861E+00	3.631E+00	5.634E+00	0.000E+00	0.330
CE-144	9.018E-01	1.464E+01	2.423E+01	0.000E+00	0.037
EU-152	7.395E-01	6.393E+00	1.030E+01	0.000E+00	0.072
EU-154	3.333E-01	4.387E+00	6.951E+00	0.000E+00	0.048
RA-226	-2.336E+01	5.418E+01	8.357E+01	0.000E+00	-0.280
AC-228	2.844E+00	8.302E+00	1.340E+01	0.000E+00	0.212
TH-228	-3.099E+00	4.314E+00	6.653E+00	0.000E+00	-0.466
TH-232	2.842E+00	8.296E+00	1.339E+01	0.000E+00	0.212
U-235	6.998E+00	1.760E+01	2.515E+01	0.000E+00	0.278
U-238	-1.154E+02	2.637E+02	4.045E+02	0.000E+00	-0.285
AM-241	-1.480E+01	2.226E+01	3.685E+01	0.000E+00	-0.402

```
A,15L29515-7      ,08/11/2006 09:17,08/08/2006 16:10,   2.853E+00,L29515-7 WG EX
B,15L29515-7      ,LIBD                ,08/07/2006 09:53,153L082604
C,K-40    ,YES,    5.458E+01,   4.408E+01,   3.093E+01,,    1.765
C,BE-7    ,NO ,    1.758E+01,   1.722E+01,   3.010E+01,,    0.584
C,NA-24   ,NO ,    9.001E-01,   2.375E+01,   3.964E+01,,    0.023
C,CR-51   ,NO ,   -9.052E+00,   1.762E+01,   2.774E+01,,   -0.326
C,MN-54   ,NO ,    5.997E-03,   2.098E+00,   3.424E+00,,    0.002
C,CO-57   ,NO ,    1.601E+00,   1.966E+00,   3.320E+00,,    0.482
C,CO-58   ,NO ,    1.036E+00,   2.049E+00,   3.459E+00,,    0.300
C,FE-59   ,NO ,   -3.765E+00,   4.065E+00,   6.032E+00,,   -0.624
C,CO-60   ,NO ,   -3.848E-01,   2.062E+00,   3.378E+00,,   -0.114
C,ZN-65   ,NO ,   -1.172E+01,   5.073E+00,   6.690E+00,,   -1.752
C,SE-75   ,NO ,    3.412E+00,   2.678E+00,   4.522E+00,,    0.755
C,SR-85   ,NO ,   -1.149E+01,   2.520E+00,   3.485E+00,,   -3.297
C,Y-88    ,NO ,   -1.723E-01,   2.226E+00,   3.605E+00,,   -0.048
C,NB-94   ,NO ,    1.120E+00,   1.996E+00,   3.389E+00,,    0.330
C,NB-95   ,NO ,    4.093E-01,   2.026E+00,   3.362E+00,,    0.122
C,ZR-95   ,NO ,   -2.835E-01,   3.433E+00,   5.599E+00,,   -0.051
C,MO-99   ,NO ,   -1.046E+00,   2.525E+01,   4.134E+01,,   -0.025
C,RU-103  ,NO ,    1.097E+00,   2.010E+00,   3.445E+00,,    0.318
C,RU-106  ,NO ,   -6.888E+00,   1.831E+01,   2.965E+01,,   -0.232
C,AG-110m ,NO ,    4.924E-01,   2.018E+00,   3.377E+00,,    0.146
C,SN-113  ,NO ,    7.713E-01,   2.542E+00,   4.338E+00,,    0.178
C,SB-124  ,NO ,   -7.551E-01,   2.467E+00,   3.261E+00,,   -0.232
C,SB-125  ,NO ,   -2.235E+00,   5.730E+00,   9.475E+00,,   -0.236
C,TE-129M ,NO ,   -6.203E+00,   2.340E+01,   3.877E+01,,   -0.160
C,I-131   ,NO ,    1.345E+00,   2.455E+00,   4.022E+00,,    0.334
C,BA-133  ,NO ,    1.867E+00,   3.149E+00,   4.552E+00,,    0.410
C,CS-134  ,NO ,    2.738E+00,   2.204E+00,   3.458E+00,,    0.792
C,CS-136  ,NO ,    5.690E-01,   2.140E+00,   3.560E+00,,    0.160
C,CS-137  ,NO ,   -1.500E-01,   2.238E+00,   3.679E+00,,   -0.041
C,CE-139  ,NO ,   -5.511E-01,   1.891E+00,   3.083E+00,,   -0.179
C,BA-140  ,NO ,    3.237E+00,   7.909E+00,   1.344E+01,,    0.241
C,LA-140  ,NO ,   -8.374E-03,   2.352E+00,   3.877E+00,,   -0.002
C,CE-141  ,NO ,    1.861E+00,   3.631E+00,   5.634E+00,,    0.330
C,CE-144  ,NO ,    9.018E-01,   1.464E+01,   2.423E+01,,    0.037
C,EU-152  ,NO ,    7.395E-01,   6.393E+00,   1.030E+01,,    0.072
C,EU-154  ,NO ,    3.333E-01,   4.387E+00,   6.951E+00,,    0.048
C,RA-226  ,NO ,   -2.336E+01,   5.418E+01,   8.357E+01,,   -0.280
C,AC-228  ,NO ,    2.844E+00,   8.302E+00,   1.340E+01,,    0.212
C,TH-228  ,NO ,   -3.099E+00,   4.314E+00,   6.653E+00,,   -0.466
C,TH-232  ,NO ,    2.842E+00,   8.296E+00,   1.339E+01,,    0.212
C,U-235   ,NO ,    6.998E+00,   1.760E+01,   2.515E+01,,    0.278
C,U-238   ,NO ,   -1.154E+02,   2.637E+02,   4.045E+02,,   -0.285
C,AM-241  ,NO ,   -1.480E+01,   2.226E+01,   3.685E+01,,   -0.402
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29543

Exelon

August 15, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29543
EX001-3ESPDRES-06

08/16/2006 09:41

Sample Receipt

The following samples were received on August 10, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-113S-080906-GL-008	L29543-1	
WG-DN-MW-DN-113I-080906-GL-009	L29543-2	
WG-DN-MW-DN-113I-080906-GL-010	L29543-3	
WG-DN-MW-DN-116I-080906-GL-011	L29543-4	
WG-DN-MW-DN-116S-080906-GL-012	L29543-5	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3 (DIST)	TBE-2010	
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29543
EX001-3ESPDRES-06

08/16/2006 09:41

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4304.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-113I080906-GL-009	L29543-2	WG4304-1

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4307.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-113S-080906-GL-008	L29543-1	WG4307-3

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4318.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29543
EX001-3ESPDRES-06

08/16/2006 09:41

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

08/10/06 09:58

SR #: SR09852

Client: Exelon

Teledyne Brown Engineering

Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06 LIMS #: L29543

Initiated By: PMARSHALL
Init Date: 08/10/06 Receive Date: 08/10/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	N	Samples required pH adjustment to get them at or below 2.
9	Other (Describe)	NA	

L29543

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXCELON / DRESDEN FACILITY

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: _____ **PRINTED NAME:** GREGORY T LEWIS

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: GAMMA SPEC	SR 89/90	TRITIUM	REMARKS
	8-9-06	1000	WG-DN-MW-DN-1135-080906-GL-008	H_2O	2	X	X	X	
	↓	1125	-"-"-"-113I-"-"-009	H_2O	2	X	X	X	
		1145	-"-"-"-113I-"-"-010	H_2O	2	X	X	X	
		1335	-"-"-"-116I-"-"-011	H_2O	2	X	X	X	
		1350	↓-↓-↓-↓-116S-↓-↓-012	H_2O	2	X	X	X	
			TOTAL NUMBER OF CONTAINERS		10				

RELINQUISHED BY: ① _____	DATE: 8-9-06 TIME: 1430	RECEIVED BY: ② B Wilkerson	DATE: 8-10-06 TIME: 10:30
RELINQUISHED BY: ② _____	DATE: TIME:	RECEIVED BY: ③ _____	DATE: TIME:
RELINQUISHED BY: ③ _____	DATE: TIME:	RECEIVED BY: ④ _____	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 4532918680

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: G. LEWIS, R. NACHETT

RECEIVED FOR LABORATORY BY: _____ DATE: _____ TIME: _____

004827

1001-00(SOURCE)GN-CO004

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

AUG 1 0 2006

ACKNOWLEDGEMENT
This is not an invoice

August 10, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on August 10, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by August 15, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-MW-DN-113S-080906-GL-0	**L29543-1**		**08/09/06:1000**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-113I080906-GL-00	**L29543-2**		**08/09/06:1125**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-113I-080906-GL-0	**L29543-3**		**08/09/06:1145**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-116I-080906-GL-0	**L29543-4**		**08/09/06:1335**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-116S-080906-GL-0	**L29543-5**		**08/09/06:1350**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		

End of document

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L29543-1 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/11/2006 11:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-1 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	030854	Donna Webb	029728	Lauren Larsen
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:06	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-2 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/11/2006 11:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-2 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	030854	Donna Webb	029728	Lauren Larsen
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:06	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-3 Containernum 1

Prod	Analyst

Internal Chain of Custody

****

Sample # L29543-3 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/11/2006 11:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-3 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	030854	Donna Webb	029728	Lauren Larsen
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:06	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-4 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/11/2006 11:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-4 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	030854	Donna Webb	029728	Lauren Larsen
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:06	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-5 Containernum 1

Prod	Analyst

Internal Chain of Custody

****

Sample # L29543-5 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/11/2006 11:05	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29543-5 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/10/2006 00:00			099999	Sample Custodian
08/10/2006 12:23	030854	Donna Webb	029728	Lauren Larsen
08/10/2006 12:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:05	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:06	030854	Donna Webb	099999	Sample Custodian

08/16/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29543

****

L29543-1 WG WG-DN-MW-DN-113S-080906-GL-008

Process step	Prod	Analyst	Date
Login		RCHARLES	08/10/06
Aliquot	GELI	DW	08/10/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/11/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/11/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29543-2 WG WG-DN-MW-DN-113I-080906-GL-009

Process step	Prod	Analyst	Date
Login		RCHARLES	08/10/06
Aliquot	GELI	DW	08/10/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/11/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/11/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29543-3 WG WG-DN-MW-DN-113I-080906-GL-010

Process step	Prod	Analyst	Date
Login		RCHARLES	08/10/06
Aliquot	GELI	DW	08/10/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/11/06
Count Room	GELI	KPW	08/10/06
Count Room	H-3 (DIST)	KOJ	08/11/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29543-4 WG WG-DN-MW-DN-116I-080906-GL-011

Process step	Prod	Analyst	Date
Login		RCHARLES	08/10/06
Aliquot	GELI	DW	08/10/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/11/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/11/06

****

L29543-5 WG WG-DN-MW-DN-116S-080906-GL-012

Process step	Prod	Analyst	Date
Login		RCHARLES	08/10/06
Aliquot	GELI	DW	08/10/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/11/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/11/06

08/16/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29543

L29543-5	**WG**	**WG-DN-MW-DN-116S-080906-GL-012**		
Count Room	SR-90	(FAST)	KOJ	08/15/06

Analytical Results Summary

Report of Analysis

08/16/06 09:59

TELEDYNE BROWN ENGINEERING, IN
A Teledyne Technologies Company

L29543

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-113S-080906-GL-008**
Station:
Description:
LIMS Number: L29543-1

Collect Start: 08/09/2006 10:00
Collect Stop:
Receive Date: 08/10/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**4.51E+02**	1.36E+02	1.79E+02	pCi/L		10	ml		08/11/06	60	M	+		
TOTAL SR	2018	1.23E+00	7.87E-01	**1.39E+00**	pCi/L		450	ml	08/09/06 10:00	08/15/06	120	M	U		
MN-54	2007	-1.32E+00	3.42E+00	**5.52E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
CO-58	2007	-3.30E+00	3.17E+00	**4.98E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
FE-59	2007	5.60E+00	6.06E+00	**1.04E+01**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
CO-60	2007	2.31E+00	3.15E+00	**5.36E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
ZN-65	2007	2.70E+01	8.23E+00	**1.36E+01**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U*		No
NB-95	2007	6.89E+00	3.26E+00	**5.73E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U*		No
ZR-95	2007	-4.21E+00	5.73E+00	**9.17E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
CS-134	2007	1.81E+01	6.90E+00	**7.08E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U*		No
CS-137	2007	1.02E+00	3.58E+00	**5.96E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
BA-140	2007	5.20E+00	1.27E+01	**2.08E+01**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No
LA-140	2007	1.60E+00	3.97E+00	**6.71E+00**	pCi/L		1008.87	ml	08/09/06 10:00	08/10/06	53641	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 09:59

TELEDYNE BROWN ENGINEERING, INC
A Teledyne Technologies Company

L29543

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-113I-080906-GL-009** Collect Start: 08/09/2006 11:25 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/10/2006 % Moisture:
LIMS Number: L29543-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values	
H-3 (DIST)	2010	-4.05E+01	1.08E+02	**1.82E+02**	pCi/L		10	ml		08/11/06	60	M	U	
TOTAL SR	2018	3.81E-01	8.03E-01	**1.58E+00**	pCi/L		450	ml	08/09/06 11:25	08/15/06	120	M	U	
K-40	2007	**5.99E+01**	3.55E+01	3.06E+01	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	+	Yes
MN-54	2007	1.21E+00	1.84E+00	**3.11E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
CO-58	2007	2.76E-01	1.80E+00	**2.97E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
FE-59	2007	-5.50E-01	3.51E+00	**5.73E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
CO-60	2007	-9.82E-03	2.04E+00	**3.31E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
ZN-65	2007	-1.04E+00	4.74E+00	**6.50E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
NB-95	2007	1.57E+00	1.83E+00	**3.12E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
ZR-95	2007	-4.11E-01	3.09E+00	**5.03E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
CS-134	2007	1.06E+00	2.30E+00	**2.90E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
CS-137	2007	2.67E-01	1.93E+00	**3.21E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
BA-140	2007	1.79E-01	6.70E+00	**1.12E+01**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No
LA-140	2007	1.85E+00	2.27E+00	**3.99E+00**	pCi/L		3169.14	ml	08/09/06 11:25	08/10/06	28800	Sec	U	No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 09:59

TELEDYNE BROWN ENGINEERING, INC
A Teledyne Technologies Company

L29543

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-113I-080906-GL-010** Collect Start: 08/09/2006 11:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/10/2006 % Moisture:
LIMS Number: L29543-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-2.38E+01	1.05E+02	**1.76E+02**	pCi/L		10	ml		08/11/06	60	M	U		
TOTAL SR	2018	1.07E+00	7.01E-01	**1.24E+00**	pCi/L		450	ml	08/09/06 11:45	08/15/06	120	M	U		
MN-54	2007	9.82E-01	1.64E+00	**2.83E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
CO-58	2007	-1.45E-01	1.72E+00	**2.87E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
FE-59	2007	3.01E+00	3.16E+00	**5.49E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
CO-60	2007	-1.85E-02	1.65E+00	**2.66E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
ZN-65	2007	-8.69E-01	3.98E+00	**5.45E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
NB-95	2007	9.33E-01	1.74E+00	**2.88E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
ZR-95	2007	2.26E+00	2.99E+00	**5.04E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
CS-134	2007	8.27E-01	2.20E+00	**2.64E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
CS-137	2007	-1.10E-01	1.89E+00	**3.07E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
BA-140	2007	-3.57E+00	6.45E+00	**1.04E+01**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No
LA-140	2007	1.42E+00	2.01E+00	**3.51E+00**	pCi/L		3201.3	ml	08/09/06 11:45	08/10/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 09:59

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29543

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-116I-080906-GL-011** (WG)
Station:
Description:
LIMS Number: L29543-4

Collect Start: 08/09/2006 13:35
Collect Stop:
Receive Date: 08/10/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**4.15E+03**	4.68E+02	3.17E+02	pCi/L		10	ml		08/11/06	18.37	M	+	High	
TOTAL SR	2018	8.99E-01	9.91E-01	**1.86E+00**	pCi/L		450	ml	08/09/06 13:35	08/15/06	120	M	U		
MN-54	2007	4.10E-01	3.16E+00	**5.29E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
CO-58	2007	-9.94E-01	2.79E+00	**4.37E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
FE-59	2007	2.32E+00	5.08E+00	**8.86E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
CO-60	2007	-8.98E-01	3.52E+00	**6.23E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
ZN-65	2007	6.88E+00	6.56E+00	**1.14E+01**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
NB-95	2007	2.20E+00	3.22E+00	**5.73E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
ZR-95	2007	1.59E+00	4.87E+00	**8.43E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
CS-134	2007	-2.11E+00	3.10E+00	**4.05E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
CS-137	2007	1.27E+00	3.01E+00	**5.28E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
BA-140	2007	-3.71E-01	9.39E+00	**1.50E+01**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No
LA-140	2007	5.69E-01	3.87E+00	**6.52E+00**	pCi/L		3118.24	ml	08/09/06 13:35	08/11/06	6602	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 09:59

TELEDYNE BROWN ENGINEERING, INC
A Teledyne Technologies Company

L29543

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-116S-080906-GL-012** Collect Start: 08/09/2006 13:50 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/10/2006 % Moisture:
LIMS Number: L29543-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**4.31E+02**	1.35E+02	1.80E+02	pCi/L		10	ml		08/11/06	60	M	+		
TOTAL SR	2018	5.34E-01	5.56E-01	**1.04E+00**	pCi/L		450	ml	08/09/06 13:50	08/15/06	120	M	U		
MN-54	2007	-1.88E+00	2.51E+00	**3.64E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
CO-58	2007	2.22E+00	2.87E+00	**5.22E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
FE-59	2007	3.23E-01	5.17E+00	**8.47E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
CO-60	2007	-2.23E-01	2.98E+00	**4.92E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
ZN-65	2007	-9.06E+00	6.94E+00	**8.86E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
NB-95	2007	2.57E+00	3.06E+00	**5.56E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
ZR-95	2007	-1.63E+00	4.44E+00	**6.99E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
CS-134	2007	-9.68E-01	3.34E+00	**4.40E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
CS-137	2007	1.34E+00	2.83E+00	**5.02E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
BA-140	2007	6.15E-01	1.10E+01	**1.79E+01**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No
LA-140	2007	-1.08E+00	3.25E+00	**4.96E+00**	pCi/L		3146.28	ml	08/09/06 13:50	08/11/06	5061	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L29543

8/16/2006 10:16:46AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P
WG4307-1	H-3 (DIST)	WO	08/11/2006 15:18	< 1.780E+00	pCi/Total	U	

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P
WG4307-2	H-3 (DIST)	WO	08/11/2006 16:22	5.05E+002	4.620E+02	pCi/Total	91.5	70-130	+	

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P
WG4307-3 L29543-1	H-3 (DIST)	WG	08/11/2006 16:42	4.510E+02	4.960E+02	pCi/L		<30	*	

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L29543

8/16/2006 10:16:46AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/
WG4318-1	TOTAL SR	WO	08/15/2006 14:02	< 1.170E+00	pCi/Total	U	I

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/
WG4318-2	TOTAL SR	WO	08/15/2006 14:02	5.84E+001	6.710E+01	pCi/Total	115.0	70-130	+	]

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/
WG4318-3 L29543-1	TOTAL SR	WG	08/15/2006 16:21	< 1.390E+00	1.750E+00	pCi/L		<30	*	N

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Aug 16 2006, 10:15 am

Work Order: *L29543* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analy
L29543-1		H-3 DIST		10 ml			0		11-aug-06 17:46	LS7	232	60	1.82	60	.204		D
WG-DN-MW-DN-113S-080906-GL-008																	
Activity: 4.51E+02 * Error: 1.36E+02			MDC: 1.79E+02														
L29543-2		H-3 DIST		10 ml			0		11-aug-06 18:50	LS7	98	60	1.82	60	.2		D
WG-DN-MW-DN-113I-080906-GL-009																	
Activity: -4.05E+01 Error: 1.08E+02			MDC: 1.82E+02 *														
L29543-3		H-3 DIST		10 ml			0		11-aug-06 19:54	LS7	103	60	1.82	60	.208		I
WG-DN-MW-DN-113I-080906-GL-010																	
Activity: -2.38E+01 Error: 1.05E+02			MDC: 1.76E+02 *														
L29543-4		H-3 DIST		10 ml			0		11-aug-06 20:58	LS7	386	18.37	1.82	60	.209		I
WG-DN-MW-DN-116I-080906-GL-011																	
Activity: 4.15E+03 * Error: 4.68E+02			MDC: 3.17E+02														
L29543-5		H-3 DIST		10 ml			0		11-aug-06 21:19	LS7	226	60	1.82	60	.203		I
WG-DN-MW-DN-116S-080906-GL-012																	
Activity: 4.31E+02 * Error: 1.35E+02			MDC: 1.8E+02														

Raw Data Sheet (rawdata)
Aug 16 2006, 10:15 am

Work Order: *L29543* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Anal
L29543-1		TOTAL SR	09-aug-06 10:00	450 ml	15-aug-06 08:30		0	77.47	15-aug-06 16:20	X1A	132	120	308	400	.346	1	
WG-DN-MW-DN-113S-080906-GL-008																	
Activity: 1.23E+00 Error: 7.87E-01 MDC: 1.39E+00 *																	
L29543-2		TOTAL SR	09-aug-06 11:25	450 ml	15-aug-06 08:30		0	72.80	15-aug-06 16:20	X1B	114	120	342	400	.343	1	
WG-DN-MW-DN-113I-080906-GL-009																	
Activity: 3.81E-01 Error: 8.03E-01 MDC: 1.58E+00 *																	
L29543-3		TOTAL SR	09-aug-06 11:45	450 ml	15-aug-06 08:30		0	82.42	15-aug-06 16:20	X1C	124	120	289	400	.354	1	
WG-DN-MW-DN-113I-080906-GL-010																	
Activity: 1.07E+00 Error: 7.01E-01 MDC: 1.24E+00 *																	
L29543-4		TOTAL SR	09-aug-06 13:35	450 ml	15-aug-06 08:30		0	57.97	15-aug-06 19:25	X1A	114	120	308	400	.346	1	
WG-DN-MW-DN-116I-080906-GL-011																	
Activity: 8.99E-01 Error: 9.91E-01 MDC: 1.86E+00 *																	
L29543-5		TOTAL SR	09-aug-06 13:50	450 ml	15-aug-06 08:30		0	101.10	15-aug-06 16:20	X2B	109	120	289	400	.345	1	
WG-DN-MW-DN-116S-080906-GL-012																	
Activity: 5.34E-01 Error: 5.56E-01 MDC: 1.04E+00 *																	

Sec. Review: Analyst: LIMS: V

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 11:39:12.20
TBE23 03017322 HpGe ********** Aquisition Date/Time: 11-AUG-2006 10:16:29.74

LIMS No., Customer Name, Client ID: WG4304-1 WG EX/DRES

Sample ID	: 23WG4304-1			Smple Date	: 9-AUG-2006 11:25:00.0
Sample Type	: WG			Geometry	: 233L082404
Quantity	: 3.16910E+00 L			BKGFILE	: 23BG072806MT
Start Channel	: 50	Energy Tol	: 1.00000	Real Time	: 0 01:22:34.69
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 01:22:31.36
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	9	34.70*	36	16	2.51	69.88	9.66E-02	7.23E-03	44.9	2.30E+00
2	9	37.77*	13	43	1.57	76.01	1.54E-01	2.63E-03	126.3	
3	9	39.77	41	63	1.53	80.00	2.00E-01	8.37E-03	40.1	
4	9	42.78*	43	116	2.54	86.03	2.81E-01	8.59E-03	47.2	
5	0	92.36*	33	242	1.45	185.07	1.93E+00	6.76E-03	95.9	
6	0	185.62*	35	109	1.27	371.39	2.17E+00	6.97E-03	62.2	
7	0	351.65*	61	64	1.25	703.18	1.44E+00	1.23E-02	29.4	
8	0	596.55	37	24	1.45	1192.78	9.55E-01	7.47E-03	31.2	
9	0	609.08*	55	28	1.00	1217.85	9.41E-01	1.11E-02	23.9	
10	0	912.16*	26	7	1.55	1824.11	7.08E-01	5.29E-03	32.1	
11	0	1461.19*	7	14	1.75	2923.27	5.09E-01	1.51E-03	153.3	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	7	10.67*	5.095E-01	2.374E+01	2.374E+01	306.53
RA-226	186.21	35	3.28*	2.175E+00	8.338E+01	8.338E+01	124.50

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23WG4304-1

Acquisition date : 11-AUG-2006 10:16:29

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.374E+01	2.374E+01	7.277E+01	306.53	
RA-226	1600.00Y	1.00	8.338E+01	8.338E+01	10.38E+01	124.50	
	Total Activity :		1.071E+02	1.071E+02			
	Grand Total Activity :		1.071E+02	1.071E+02			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23WG4304-1

Acquisition date : 11-AUG-2006 10:16:29

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
9	34.70	36	16	2.51	69.88	65	26	7.23E-03	89.7	9.66E-02	
9	37.77	13	43	1.57	76.01	65	26	2.63E-03	****	1.54E-01	
9	39.77	41	63	1.53	80.00	65	26	8.37E-03	80.2	2.00E-01	
9	42.78	43	116	2.54	86.03	65	26	8.59E-03	94.4	2.81E-01	
0	92.36	33	242	1.45	185.07	179	11	6.76E-03	****	1.93E+00	
0	351.65	61	64	1.25	703.18	698	11	1.23E-02	58.8	1.44E+00	
0	596.55	37	24	1.45	1192.78	1188	12	7.47E-03	62.3	9.55E-01	
0	609.08	55	28	1.00	1217.85	1212	10	1.11E-02	47.9	9.41E-01	
0	912.16	26	7	1.55	1824.11	1817	15	5.29E-03	64.3	7.08E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.374E+01	2.374E+01	7.277E+01	306.53	
RA-226	1600.00Y	1.00	8.338E+01	8.338E+01	10.38E+01	124.50	
	Total Activity :		1.071E+02	1.071E+02			

Grand Total Activity : 1.071E+02 1.071E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.374E+01	7.277E+01	5.063E+01	0.000E+00	0.469
RA-226	8.338E+01	1.038E+02	1.325E+02	0.000E+00	0.629

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-1.074E+00	2.246E+01	4.043E+01	0.000E+00	-0.027
NA-24	-4.200E+00	2.638E+01	4.959E+01	0.000E+00	-0.085
CR-51	-9.100E-01	2.782E+01	4.913E+01	0.000E+00	-0.019
MN-54	1.067E+00	3.248E+00	6.313E+00	0.000E+00	0.169
CO-57	-1.385E+00	3.390E+00	5.461E+00	0.000E+00	-0.254
CO-58	-5.669E-01	2.872E+00	5.320E+00	0.000E+00	-0.107
FE-59	2.073E+00	5.563E+00	1.118E+01	0.000E+00	0.185
CO-60	-1.578E+00	2.896E+00	5.012E+00	0.000E+00	-0.315
ZN-65	-7.857E+00	6.533E+00	9.949E+00	0.000E+00	-0.790
SE-75	-7.275E-01	4.141E+00	7.246E+00	0.000E+00	-0.100
SR-85	-6.741E+00	3.911E+00	5.746E+00	0.000E+00	-1.173
Y-88	1.843E+00	3.279E+00	7.172E+00	0.000E+00	0.257
NB-94	2.243E+00	2.678E+00	5.407E+00	0.000E+00	0.415
NB-95	2.461E+00	3.311E+00	6.443E+00	0.000E+00	0.382
ZR-95	-4.123E+00	4.950E+00	7.702E+00	0.000E+00	-0.535
MO-99	-9.111E+00	3.767E+01	6.521E+01	0.000E+00	-0.140
RU-103	-4.313E-01	3.278E+00	5.748E+00	0.000E+00	-0.075
RU-106	1.293E+01	2.488E+01	4.858E+01	0.000E+00	0.266
AG-110m	-2.644E+00	3.065E+00	4.820E+00	0.000E+00	-0.549
SN-113	7.033E-02	4.246E+00	7.538E+00	0.000E+00	0.009
SB-124	1.140E+00	3.901E+00	5.491E+00	0.000E+00	0.208
SB-125	-2.697E+00	8.885E+00	1.535E+01	0.000E+00	-0.176
TE-129M	-1.274E+01	3.413E+01	5.859E+01	0.000E+00	-0.218
I-131	-1.893E+00	3.715E+00	6.298E+00	0.000E+00	-0.300
BA-133	-8.490E-01	4.761E+00	7.267E+00	0.000E+00	-0.117
CS-134	2.334E+00	3.299E+00	5.760E+00	0.000E+00	0.405
CS-136	-3.880E-01	3.179E+00	5.939E+00	0.000E+00	-0.065
CS-137	6.115E-01	3.530E+00	6.432E+00	0.000E+00	0.095
CE-139	1.679E+00	3.239E+00	5.870E+00	0.000E+00	0.286
BA-140	7.691E+00	1.172E+01	2.262E+01	0.000E+00	0.340
LA-140	-2.517E-01	3.632E+00	6.953E+00	0.000E+00	-0.036
CE-141	-3.306E+00	5.764E+00	9.904E+00	0.000E+00	-0.334
CE-144	-3.562E+01	2.474E+01	4.071E+01	0.000E+00	-0.875
EU-152	4.482E-01	9.447E+00	1.686E+01	0.000E+00	0.027
EU-154	-6.116E+00	7.112E+00	1.113E+01	0.000E+00	-0.549
AC-228	9.189E+00	1.099E+01	2.403E+01	0.000E+00	0.382
TH-228	-2.070E+00	6.119E+00	1.083E+01	0.000E+00	-0.191
TH-232	9.183E+00	1.098E+01	2.401E+01	0.000E+00	0.382
U-235	-2.099E+01	2.660E+01	4.527E+01	0.000E+00	-0.464
U-238	-3.362E+02	3.876E+02	6.659E+02	0.000E+00	-0.505
AM-241	-3.016E-01	1.950E+01	3.271E+01	0.000E+00	-0.009

```
A,23WG4304-1       ,08/11/2006 11:39,08/09/2006 11:25,   3.169E+00,WG4304-1 WG EX
B,23WG4304-1       ,LIBD                ,08/11/2006 09:57,233L082404
C,K-40     ,YES,    2.374E+01,    7.277E+01,    5.063E+01,,     0.469
C,RA-226   ,YES,    8.338E+01,    1.038E+02,    1.325E+02,,     0.629
C,BE-7     ,NO ,   -1.074E+00,    2.246E+01,    4.043E+01,,    -0.027
C,NA-24    ,NO ,   -4.200E+00,    2.638E+01,    4.959E+01,,    -0.085
C,CR-51    ,NO ,   -9.100E-01,    2.782E+01,    4.913E+01,,    -0.019
C,MN-54    ,NO ,    1.067E+00,    3.248E+00,    6.313E+00,,     0.169
C,CO-57    ,NO ,   -1.385E+00,    3.390E+00,    5.461E+00,,    -0.254
C,CO-58    ,NO ,   -5.669E-01,    2.872E+00,    5.320E+00,,    -0.107
C,FE-59    ,NO ,    2.073E+00,    5.563E+00,    1.118E+01,,     0.185
C,CO-60    ,NO ,   -1.578E+00,    2.896E+00,    5.012E+00,,    -0.315
C,ZN-65    ,NO ,   -7.857E+00,    6.533E+00,    9.949E+00,,    -0.790
C,SE-75    ,NO ,   -7.275E-01,    4.141E+00,    7.246E+00,,    -0.100
C,SR-85    ,NO ,   -6.741E+00,    3.911E+00,    5.746E+00,,    -1.173
C,Y-88     ,NO ,    1.843E+00,    3.279E+00,    7.172E+00,,     0.257
C,NB-94    ,NO ,    2.243E+00,    2.678E+00,    5.407E+00,,     0.415
C,NB-95    ,NO ,    2.461E+00,    3.311E+00,    6.443E+00,,     0.382
C,ZR-95    ,NO ,   -4.123E+00,    4.950E+00,    7.702E+00,,    -0.535
C,MO-99    ,NO ,   -9.111E+00,    3.767E+01,    6.521E+01,,    -0.140
C,RU-103   ,NO ,   -4.313E-01,    3.278E+00,    5.748E+00,,    -0.075
C,RU-106   ,NO ,    1.293E+01,    2.488E+01,    4.858E+01,,     0.266
C,AG-110m  ,NO ,   -2.644E+00,    3.065E+00,    4.820E+00,,    -0.549
C,SN-113   ,NO ,    7.033E-02,    4.246E+00,    7.538E+00,,     0.009
C,SB-124   ,NO ,    1.140E+00,    3.901E+00,    5.491E+00,,     0.208
C,SB-125   ,NO ,   -2.697E+00,    8.885E+00,    1.535E+01,,    -0.176
C,TE-129M  ,NO ,   -1.274E+01,    3.413E+01,    5.859E+01,,    -0.218
C,I-131    ,NO ,   -1.893E+00,    3.715E+00,    6.298E+00,,    -0.300
C,BA-133   ,NO ,   -8.490E-01,    4.761E+00,    7.267E+00,,    -0.117
C,CS-134   ,NO ,    2.334E+00,    3.299E+00,    5.760E+00,,     0.405
C,CS-136   ,NO ,   -3.880E-01,    3.179E+00,    5.939E+00,,    -0.065
C,CS-137   ,NO ,    6.115E-01,    3.530E+00,    6.432E+00,,     0.095
C,CE-139   ,NO ,    1.679E+00,    3.239E+00,    5.870E+00,,     0.286
C,BA-140   ,NO ,    7.691E+00,    1.172E+01,    2.262E+01,,     0.340
C,LA-140   ,NO ,   -2.517E-01,    3.632E+00,    6.953E+00,,    -0.036
C,CE-141   ,NO ,   -3.306E+00,    5.764E+00,    9.904E+00,,    -0.334
C,CE-144   ,NO ,   -3.562E+01,    2.474E+01,    4.071E+01,,    -0.875
C,EU-152   ,NO ,    4.482E-01,    9.447E+00,    1.686E+01,,     0.027
C,EU-154   ,NO ,   -6.116E+00,    7.112E+00,    1.113E+01,,    -0.549
C,AC-228   ,NO ,    9.189E+00,    1.099E+01,    2.403E+01,,     0.382
C,TH-228   ,NO ,   -2.070E+00,    6.119E+00,    1.083E+01,,    -0.191
C,TH-232   ,NO ,    9.183E+00,    1.098E+01,    2.401E+01,,     0.382
C,U-235    ,NO ,   -2.099E+01,    2.660E+01,    4.527E+01,,    -0.464
C,U-238    ,NO ,   -3.362E+02,    3.876E+02,    6.659E+02,,    -0.505
C,AM-241   ,NO ,   -3.016E-01,    1.950E+01,    3.271E+01,,    -0.009
```

Sec. Review: KO Analyst: JW LIMS: V

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 09:04:09.33
TBE10 12892256 HpGe ********** Aquisition Date/Time: 10-AUG-2006 18:09:33.15

LIMS No., Customer Name, Client ID: L29543-1 WG EX/DRES

Sample ID : 10L29543-1
Sample Type : WG
Quantity : 1.00890E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 9-AUG-2006 10:00:00.0
Geometry : 101L082304
BKGFILE : 10BG072806MT
Real Time : 0 14:54:09.82
Live time : 0 14:54:01.35

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	4	63.35*	102	1275	1.25	125.88	9.84E-01	1.89E-03	67.9	1.13E+00
2	4	66.34	256	1656	1.58	131.88	1.14E+00	4.77E-03	30.2	
3	3	73.10*	6	1187	1.21	145.40	1.49E+00	1.13E-04*****		1.82E+00
4	3	77.16	322	1230	1.31	153.55	1.68E+00	6.00E-03	20.6	
5	1	87.33*	77	905	1.31	173.90	2.11E+00	1.43E-03	73.6	1.08E+00
6	1	92.75*	61	1377	1.14	184.74	2.29E+00	1.13E-03	130.2	7.68E-01
7	1	139.71	215	1388	1.69	278.76	2.89E+00	4.01E-03	31.9	3.24E-01
8	1	185.83*	8	1193	1.11	371.09	2.69E+00	1.45E-04	937.9	6.18E-01
9	1	198.37*	29	1138	1.50	396.18	2.61E+00	5.42E-04	249.2	1.78E+00
10	1	238.54*	65	1399	0.99	476.62	2.33E+00	1.21E-03	125.4	1.08E+00
11	1	242.26	171	746	1.30	484.05	2.31E+00	3.18E-03	27.7	1.00E+00
12	1	295.27*	329	854	1.21	590.19	1.99E+00	6.13E-03	18.9	8.58E-01
13	1	352.01*	537	591	1.10	703.80	1.73E+00	1.00E-02	10.7	8.68E-01
14	1	583.04*	53	257	1.69	1166.37	1.15E+00	9.81E-04	69.8	9.07E-01
15	1	596.10	122	295	2.33	1192.52	1.13E+00	2.28E-03	27.8	2.41E+00
16	1	609.27*	569	373	1.57	1218.89	1.11E+00	1.06E-02	9.5	1.31E+00
17	1	910.80*	34	125	2.11	1822.71	8.00E-01	6.32E-04	80.4	1.24E+00
18	1	1120.12*	103	157	1.89	2241.94	6.78E-01	1.93E-03	30.4	1.08E+00
19	1	1238.15*	64	85	1.75	2478.35	6.26E-01	1.19E-03	36.1	1.16E+00
20	1	1460.75*	38	85	2.23	2924.23	5.49E-01	7.10E-04	89.7	1.76E+00
21	1	1764.38*	72	68	2.21	3532.53	4.74E-01	1.33E-03	34.1	5.62E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	38	10.67*	5.491E-01	3.244E+01	3.244E+01	179.47
RA-226	186.21	8	3.28*	2.693E+00	4.402E+00	4.402E+00	1875.72
AC-228	835.50	------	1.75	8.569E-01	------ Line Not Found		------
	911.07	34	27.70*	7.997E-01	7.638E+00	7.642E+00	160.79
TH-228	238.63	65	44.60*	2.331E+00	3.109E+00	3.114E+00	250.79
	240.98	------	3.95	2.315E+00	------ Line Not Found		------
TH-232	583.14	53	30.25	1.146E+00	7.578E+00	7.578E+00	139.64
	911.07	34	27.70*	7.997E-01	7.638E+00	7.638E+00	160.79
	969.11	------	16.60	7.610E-01	------ Line Not Found		------

U-235	143.76	------	10.50*	2.888E+00	------	Line Not Found	------
	163.35	------	4.70	2.826E+00	------	Line Not Found	------
	185.71	8	54.00	2.693E+00	2.674E-01	2.674E-01	1875.72
	205.31	------	4.70	2.559E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L29543-1

Acquisition date : 10-AUG-2006 18:09:33

Total number of lines in spectrum	21	
Number of unidentified lines	16	
Number of lines tentatively identified by NID	5	23.81%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.244E+01	3.244E+01	5.822E+01	179.47	
RA-226	1600.00Y	1.00	4.402E+00	4.402E+00	82.56E+00	1875.72	
AC-228	5.75Y	1.00	7.638E+00	7.642E+00	12.29E+00	160.79	
TH-228	1.91Y	1.00	3.109E+00	3.114E+00	7.810E+00	250.79	
TH-232	1.41E+10Y	1.00	7.638E+00	7.638E+00	12.28E+00	160.79	
U-235	7.04E+08Y	1.00	2.674E-01	2.674E-01	50.15E-01	1875.72	K
			---------	---------			
	Total Activity :		5.550E+01	5.550E+01			

Grand Total Activity : 5.550E+01 5.550E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L29543-1

Acquisition date : 10-AUG-2006 18:09:33

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	63.35	102	1275	1.25	125.88	120	17	1.89E-03	****	9.84E-01	
4	66.34	256	1656	1.58	131.88	120	17	4.77E-03	60.3	1.14E+00	
3	73.10	6	1187	1.21	145.40	142	16	1.13E-04	****	1.49E+00	
3	77.16	322	1230	1.31	153.55	142	16	6.00E-03	41.2	1.68E+00	
1	87.33	77	905	1.31	173.90	172	6	1.43E-03	****	2.11E+00	
1	92.75	61	1377	1.14	184.74	181	9	1.13E-03	****	2.29E+00	
1	139.71	215	1388	1.69	278.76	275	9	4.01E-03	63.9	2.89E+00	
1	198.37	29	1138	1.50	396.18	392	9	5.42E-04	****	2.61E+00	
1	242.26	171	746	1.30	484.05	481	7	3.18E-03	55.4	2.31E+00	
1	295.27	329	854	1.21	590.19	586	10	6.13E-03	37.8	1.99E+00	
1	352.01	537	591	1.10	703.80	699	9	1.00E-02	21.5	1.73E+00	
1	596.10	122	295	2.33	1192.52	1188	10	2.28E-03	55.7	1.13E+00	
1	609.27	569	373	1.57	1218.89	1211	14	1.06E-02	18.9	1.11E+00	
1	1120.12	103	157	1.89	2241.94	2235	14	1.93E-03	60.8	6.78E-01	
1	1238.15	64	85	1.75	2478.35	2475	11	1.19E-03	72.2	6.26E-01	
1	1764.38	72	68	2.21	3532.53	3523	17	1.33E-03	68.1	4.74E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	21	
Number of unidentified lines	16	
Number of lines tentatively identified by NID	5	23.81%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.244E+01	3.244E+01	5.822E+01	179.47	
RA-226	1600.00Y	1.00	4.402E+00	4.402E+00	82.56E+00	1875.72	
AC-228	5.75Y	1.00	5.968E-02	5.971E-02	1622.E-02	27166.14	
TH-228	1.91Y	1.00	3.109E+00	3.114E+00	7.810E+00	250.79	
TH-232	1.41E+10Y	1.00	7.578E+00	7.578E+00	10.58E+00	139.64	
	Total Activity :		4.759E+01	4.759E+01			
	Grand Total Activity :		4.759E+01	4.759E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.244E+01	5.822E+01	5.034E+01	0.000E+00	0.644
RA-226	4.402E+00	8.256E+01	1.253E+02	0.000E+00	0.035
AC-228	5.971E-02	1.622E+01	1.889E+01	0.000E+00	0.003
TH-228	3.114E+00	7.810E+00	9.496E+00	0.000E+00	0.328
TH-232	7.578E+00	1.058E+01	2.104E+01	0.000E+00	0.360

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.178E+00		2.873E+01	4.676E+01	0.000E+00	-0.047
NA-24	-2.564E+01		2.092E+01	3.193E+01	0.000E+00	-0.803
CR-51	5.595E+00		2.832E+01	4.704E+01	0.000E+00	0.119
MN-54	-1.318E+00		3.420E+00	5.517E+00	0.000E+00	-0.239
CO-57	1.485E+00		2.932E+00	4.874E+00	0.000E+00	0.305
CO-58	-3.298E+00		3.170E+00	4.984E+00	0.000E+00	-0.662
FE-59	5.599E+00		6.064E+00	1.041E+01	0.000E+00	0.538
CO-60	2.308E+00		3.151E+00	5.358E+00	0.000E+00	0.431
ZN-65	2.699E+01		8.231E+00	1.361E+01	0.000E+00	1.983
SE-75	-1.872E+00		4.315E+00	7.129E+00	0.000E+00	-0.263
SR-85	4.067E+01		4.079E+00	7.880E+00	0.000E+00	5.161
Y-88	-4.820E+00		3.482E+00	5.188E+00	0.000E+00	-0.929
NB-94	-4.269E+00		3.294E+00	5.209E+00	0.000E+00	-0.820
NB-95	6.892E+00		3.260E+00	5.725E+00	0.000E+00	1.204
ZR-95	-4.210E+00		5.730E+00	9.169E+00	0.000E+00	-0.459
MO-99	1.728E+01		3.616E+01	6.044E+01	0.000E+00	0.286
RU-103	-3.427E+00		3.482E+00	5.520E+00	0.000E+00	-0.621
RU-106	-2.689E+00		3.080E+01	5.023E+01	0.000E+00	-0.054
AG-110m	-4.556E-01		3.216E+00	5.293E+00	0.000E+00	-0.086
SN-113	2.704E-01		4.211E+00	6.930E+00	0.000E+00	0.039
SB-124	3.076E+00		7.538E+00	5.627E+00	0.000E+00	0.547
SB-125	-8.864E-01		9.697E+00	1.585E+01	0.000E+00	-0.056
TE-129M	6.754E+00		3.879E+01	6.364E+01	0.000E+00	0.106
I-131	-1.820E+00		3.847E+00	6.272E+00	0.000E+00	-0.290
BA-133	2.735E+01		5.789E+00	9.139E+00	0.000E+00	2.992
CS-134	1.805E+01		6.898E+00	7.082E+00	0.000E+00	2.548
CS-136	-6.216E-01		3.393E+00	5.515E+00	0.000E+00	-0.113
CS-137	1.022E+00		3.575E+00	5.959E+00	0.000E+00	0.171
CE-139	2.593E+00		3.098E+00	5.137E+00	0.000E+00	0.505
BA-140	5.204E+00		1.266E+01	2.081E+01	0.000E+00	0.250
LA-140	1.597E+00		3.968E+00	6.711E+00	0.000E+00	0.238
CE-141	4.663E+00		6.155E+00	8.724E+00	0.000E+00	0.535
CE-144	8.195E-01		2.690E+01	3.766E+01	0.000E+00	0.022
EU-152	-2.060E+01		1.248E+01	1.654E+01	0.000E+00	-1.246
EU-154	2.310E+00		6.163E+00	1.023E+01	0.000E+00	0.226
U-235	3.575E+01		2.760E+01	3.956E+01	0.000E+00	0.904
U-238	4.894E+02		3.474E+02	6.087E+02	0.000E+00	0.804
AM-241	2.165E+01		2.842E+01	3.977E+01	0.000E+00	0.544

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A,10L29543-1      ,08/11/2006 09:04,08/09/2006 10:00,   1.009E+00,L29543-1 WG EX
B,10L29543-1      ,LIBD                ,08/07/2006 09:39,101L082304
C,K-40     ,YES,    3.244E+01,    5.822E+01,    5.034E+01,,     0.644
C,RA-226   ,YES,    4.402E+00,    8.256E+01,    1.253E+02,,     0.035
C,AC-228   ,YES,    5.971E-02,    1.622E+01,    1.889E+01,,     0.003
C,TH-228   ,YES,    3.114E+00,    7.810E+00,    9.496E+00,,     0.328
C,TH-232   ,YES,    7.578E+00,    1.058E+01,    2.104E+01,,     0.360
C,BE-7     ,NO ,   -2.178E+00,    2.873E+01,    4.676E+01,,    -0.047
C,NA-24    ,NO ,   -2.564E+01,    2.092E+01,    3.193E+01,,    -0.803
C,CR-51    ,NO ,    5.595E+00,    2.832E+01,    4.704E+01,,     0.119
C,MN-54    ,NO ,   -1.318E+00,    3.420E+00,    5.517E+00,,    -0.239
C,CO-57    ,NO ,    1.485E+00,    2.932E+00,    4.874E+00,,     0.305
C,CO-58    ,NO ,   -3.298E+00,    3.170E+00,    4.984E+00,,    -0.662
C,FE-59    ,NO ,    5.599E+00,    6.064E+00,    1.041E+01,,     0.538
C,CO-60    ,NO ,    2.308E+00,    3.151E+00,    5.358E+00,,     0.431
C,ZN-65    ,NO ,    2.699E+01,    8.231E+00,    1.361E+01,,     1.983
C,SE-75    ,NO ,   -1.872E+00,    4.315E+00,    7.129E+00,,    -0.263
C,SR-85    ,NO ,    4.067E+01,    4.079E+00,    7.880E+00,,     5.161
C,Y-88     ,NO ,   -4.820E+00,    3.482E+00,    5.188E+00,,    -0.929
C,NB-94    ,NO ,   -4.269E+00,    3.294E+00,    5.209E+00,,    -0.820
C,NB-95    ,NO ,    6.892E+00,    3.260E+00,    5.725E+00,,     1.204
C,ZR-95    ,NO ,   -4.210E+00,    5.730E+00,    9.169E+00,,    -0.459
C,MO-99    ,NO ,    1.728E+01,    3.616E+01,    6.044E+01,,     0.286
C,RU-103   ,NO ,   -3.427E+00,    3.482E+00,    5.520E+00,,    -0.621
C,RU-106   ,NO ,   -2.689E+00,    3.080E+01,    5.023E+01,,    -0.054
C,AG-110m  ,NO ,   -4.556E-01,    3.216E+00,    5.293E+00,,    -0.086
C,SN-113   ,NO ,    2.704E-01,    4.211E+00,    6.930E+00,,     0.039
C,SB-124   ,NO ,    3.076E+00,    7.538E+00,    5.627E+00,,     0.547
C,SB-125   ,NO ,   -8.864E-01,    9.697E+00,    1.585E+01,,    -0.056
C,TE-129M  ,NO ,    6.754E+00,    3.879E+01,    6.364E+01,,     0.106
C,I-131    ,NO ,   -1.820E+00,    3.847E+00,    6.272E+00,,    -0.290
C,BA-133   ,NO ,    2.735E+01,    5.789E+00,    9.139E+00,,     2.992
C,CS-134   ,NO ,    1.805E+01,    6.898E+00,    7.082E+00,,     2.548
C,CS-136   ,NO ,   -6.216E-01,    3.393E+00,    5.515E+00,,    -0.113
C,CS-137   ,NO ,    1.022E+00,    3.575E+00,    5.959E+00,,     0.171
C,CE-139   ,NO ,    2.593E+00,    3.098E+00,    5.137E+00,,     0.505
C,BA-140   ,NO ,    5.204E+00,    1.266E+01,    2.081E+01,,     0.250
C,LA-140   ,NO ,    1.597E+00,    3.968E+00,    6.711E+00,,     0.238
C,CE-141   ,NO ,    4.663E+00,    6.155E+00,    8.724E+00,,     0.535
C,CE-144   ,NO ,    8.195E-01,    2.690E+01,    3.766E+01,,     0.022
C,EU-152   ,NO ,   -2.060E+01,    1.248E+01,    1.654E+01,,    -1.246
C,EU-154   ,NO ,    2.310E+00,    6.163E+00,    1.023E+01,,     0.226
C,U-235    ,NO ,    3.575E+01,    2.760E+01,    3.956E+01,,     0.904
C,U-238    ,NO ,    4.894E+02,    3.474E+02,    6.087E+02,,     0.804
C,AM-241   ,NO ,    2.165E+01,    2.842E+01,    3.977E+01,,     0.544
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Sec. Review: KED Analyst: JM LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 09:07:51.58
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 10-AUG-2006 18:09:41.92

LIMS No., Customer Name, Client ID: L29543-2 L29543-2 WG EX/DRES

Sample ID : 11L29543-2
Sample Type : WG
Quantity : 3.16910E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 9-AUG-2006 11:25:00.0
Geometry : 113L082304
BKGFILE : 11BG072806MT
Real Time : 0 08:00:11.68
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.45	157	1312	0.98	132.49	6.91E-01	5.45E-03	39.2	
2	7	82.49	190	664	1.39	164.66	1.21E+00	6.61E-03	19.4	7.39E+00
3	7	84.52*	58	1216	1.38	168.74	1.27E+00	2.03E-03	113.0	
4	0	139.69*	201	653	1.55	279.42	1.90E+00	6.98E-03	23.1	
5	0	185.06*	104	930	1.26	370.39	1.80E+00	3.61E-03	63.4	
6	0	198.31*	154	662	1.39	396.97	1.75E+00	5.34E-03	32.8	
7	0	238.49*	63	443	1.42	477.55	1.58E+00	2.18E-03	65.5	
8	0	241.68	144	469	1.35	483.93	1.56E+00	4.99E-03	27.5	
9	0	295.11*	117	533	1.22	591.06	1.37E+00	4.07E-03	40.0	
10	0	351.79*	240	356	1.25	704.67	1.20E+00	8.32E-03	17.7	
11	0	596.05	152	195	1.22	1194.02	8.03E-01	5.29E-03	20.0	
12	0	609.04*	242	220	1.47	1220.02	7.90E-01	8.40E-03	15.4	
13	0	911.60*	21	140	1.87	1825.56	5.74E-01	7.12E-04	154.7	
14	0	1120.76*	36	122	1.63	2243.79	4.86E-01	1.26E-03	74.7	
15	0	1460.62*	85	54	1.98	2922.71	3.92E-01	2.94E-03	29.6	
16	0	1761.96	95	37	2.48	3524.01	3.39E-01	3.31E-03	17.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	85	10.67*	3.919E-01	5.993E+01	5.993E+01	59.29
AC-228	835.50	------	1.75	6.158E-01	------	Line Not Found	------
	911.07	21	27.70*	5.743E-01	3.818E+00	3.820E+00	309.37
TH-228	238.63	63	44.60*	1.577E+00	2.646E+00	2.650E+00	131.07
	240.98	144	3.95	1.564E+00	6.885E+01	6.895E+01	54.93
U-235	143.76	------	10.50*	1.906E+00	------	Line Not Found	------
	163.35	------	4.70	1.876E+00	------	Line Not Found	------
	185.71	104	54.00	1.802E+00	3.163E+00	3.163E+00	126.76
	205.31	------	4.70	1.718E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L29543-2

Acquisition date : 10-AUG-2006 18:09:41

Total number of lines in spectrum	16	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	5	31.25%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.993E+01	5.993E+01	3.554E+01	59.29	
AC-228	5.75Y	1.00	3.818E+00	3.820E+00	11.82E+00	309.37	
TH-228	1.91Y	1.00	2.646E+00	2.650E+00	3.473E+00	131.07	
U-235	7.04E+08Y	1.00	3.163E+00	3.163E+00	4.010E+00	126.76	K
	Total Activity :		6.956E+01	6.957E+01			

Grand Total Activity : 6.956E+01 6.957E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L29543-2

Acquisition date : 10-AUG-2006 18:09:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.45	157	1312	0.98	132.49	129	7	5.45E-03	78.3	6.91E-01	
7	82.49	190	664	1.39	164.66	162	11	6.61E-03	38.8	1.21E+00	
7	84.52	58	1216	1.38	168.74	162	11	2.03E-03	****	1.27E+00	
0	139.69	201	653	1.55	279.42	276	7	6.98E-03	46.1	1.90E+00	
0	198.31	154	662	1.39	396.97	393	9	5.34E-03	65.6	1.75E+00	
0	295.11	117	533	1.22	591.06	587	10	4.07E-03	80.0	1.37E+00	
0	351.79	240	356	1.25	704.67	700	10	8.32E-03	35.3	1.20E+00	
0	596.05	152	195	1.22	1194.02	1189	12	5.29E-03	40.1	8.03E-01	
0	609.04	242	220	1.47	1220.02	1214	13	8.40E-03	30.8	7.90E-01	
0	1120.76	36	122	1.63	2243.79	2236	16	1.26E-03	****	4.86E-01	
0	1761.96	95	37	2.48	3524.01	3518	16	3.31E-03	34.9	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	16	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	5	31.25%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.993E+01	5.993E+01	3.554E+01	59.29	
AC-228	5.75Y	1.00	3.818E+00	3.820E+00	11.82E+00	309.37	
TH-228	1.91Y	1.00	2.646E+00	2.650E+00	3.473E+00	131.07	
U-235	7.04E+08Y	1.00	3.163E+00	3.163E+00	4.010E+00	126.76	
	Total Activity :		6.956E+01	6.957E+01			

Grand Total Activity : 6.956E+01 6.957E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.993E+01	3.554E+01	3.064E+01	0.000E+00	1.956
AC-228	3.820E+00	1.182E+01	1.050E+01	0.000E+00	0.364
TH-228	2.650E+00	3.473E+00	5.129E+00	0.000E+00	0.517
U-235	3.163E+00	4.010E+00	2.221E+01	0.000E+00	0.142

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.064E+00		1.499E+01	2.417E+01	0.000E+00	-0.085
NA-24	-1.681E+00		9.702E+00	1.555E+01	0.000E+00	-0.108
CR-51	-9.969E+00		1.558E+01	2.534E+01	0.000E+00	-0.393
MN-54	1.211E+00		1.843E+00	3.105E+00	0.000E+00	0.390
CO-57	8.559E-01		1.622E+00	2.717E+00	0.000E+00	0.315
CO-58	2.762E-01		1.804E+00	2.966E+00	0.000E+00	0.093
FE-59	-5.499E-01		3.505E+00	5.731E+00	0.000E+00	-0.096
CO-60	-9.822E-03		2.036E+00	3.312E+00	0.000E+00	-0.003
ZN-65	-1.044E+00		4.735E+00	6.500E+00	0.000E+00	-0.161
SE-75	-2.115E+00		2.390E+00	3.907E+00	0.000E+00	-0.541
SR-85	3.055E+00		2.239E+00	3.770E+00	0.000E+00	0.810
Y-88	5.211E-01		2.195E+00	3.661E+00	0.000E+00	0.142
NB-94	-1.642E+00		1.721E+00	2.699E+00	0.000E+00	-0.608
NB-95	1.567E+00		1.826E+00	3.117E+00	0.000E+00	0.503
ZR-95	-4.113E-01		3.093E+00	5.030E+00	0.000E+00	-0.082
MO-99	1.518E+00		1.934E+01	3.186E+01	0.000E+00	0.048
RU-103	-5.282E-01		1.808E+00	2.887E+00	0.000E+00	-0.183
RU-106	-1.424E+01		1.655E+01	2.635E+01	0.000E+00	-0.540
AG-110m	4.564E-01		1.742E+00	2.915E+00	0.000E+00	0.157
SN-113	-2.228E-01		2.291E+00	3.745E+00	0.000E+00	-0.059
SB-124	1.183E+00		3.168E+00	2.812E+00	0.000E+00	0.421
SB-125	4.347E+00		5.023E+00	8.478E+00	0.000E+00	0.513
TE-129M	2.273E+00		2.087E+01	3.408E+01	0.000E+00	0.067
I-131	1.208E+00		1.925E+00	3.242E+00	0.000E+00	0.373
BA-133	-2.535E-01		2.657E+00	3.745E+00	0.000E+00	-0.068
CS-134	1.059E+00		2.303E+00	2.902E+00	0.000E+00	0.365
CS-136	6.047E-02		1.825E+00	2.979E+00	0.000E+00	0.020
CS-137	2.669E-01		1.932E+00	3.213E+00	0.000E+00	0.083
CE-139	8.494E-01		1.685E+00	2.789E+00	0.000E+00	0.305
BA-140	1.788E-01		6.701E+00	1.123E+01	0.000E+00	0.016
LA-140	1.848E+00		2.274E+00	3.994E+00	0.000E+00	0.463
CE-141	1.689E+00		3.138E+00	4.932E+00	0.000E+00	0.342
CE-144	-8.613E-01		1.340E+01	2.081E+01	0.000E+00	-0.041
EU-152	7.326E-01		5.803E+00	9.187E+00	0.000E+00	0.080
EU-154	1.174E+00		3.434E+00	5.726E+00	0.000E+00	0.205
RA-226	2.790E+00		5.408E+01	7.500E+01	0.000E+00	0.037
TH-232	3.818E+00	+	1.181E+01	1.212E+01	0.000E+00	0.315
U-238	1.199E+02		1.863E+02	3.217E+02	0.000E+00	0.373
AM-241	-2.263E+01		2.050E+01	3.217E+01	0.000E+00	-0.703

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A,11L29543-2       ,08/11/2006 09:07,08/09/2006 11:25,   3.169E+00,L29543-2 L2954
B,11L29543-2       ,LIBD                ,08/07/2006 09:39,113L082304
C,K-40     ,YES,    5.993E+01,    3.554E+01,    3.064E+01,,     1.956
C,AC-228   ,YES,    3.820E+00,    1.182E+01,    1.050E+01,,     0.364
C,TH-228   ,YES,    2.650E+00,    3.473E+00,    5.129E+00,,     0.517
C,U-235    ,YES,    3.163E+00,    4.010E+00,    2.221E+01,,     0.142
C,BE-7     ,NO ,   -2.064E+00,    1.499E+01,    2.417E+01,,    -0.085
C,NA-24    ,NO ,   -1.681E+00,    9.702E+00,    1.555E+01,,    -0.108
C,CR-51    ,NO ,   -9.969E+00,    1.558E+01,    2.534E+01,,    -0.393
C,MN-54    ,NO ,    1.211E+00,    1.843E+00,    3.105E+00,,     0.390
C,CO-57    ,NO ,    8.559E-01,    1.622E+00,    2.717E+00,,     0.315
C,CO-58    ,NO ,    2.762E-01,    1.804E+00,    2.966E+00,,     0.093
C,FE-59    ,NO ,   -5.499E-01,    3.505E+00,    5.731E+00,,    -0.096
C,CO-60    ,NO ,   -9.822E-03,    2.036E+00,    3.312E+00,,    -0.003
C,ZN-65    ,NO ,   -1.044E+00,    4.735E+00,    6.500E+00,,    -0.161
C,SE-75    ,NO ,   -2.115E+00,    2.390E+00,    3.907E+00,,    -0.541
C,SR-85    ,NO ,    3.055E+00,    2.239E+00,    3.770E+00,,     0.810
C,Y-88     ,NO ,    5.211E-01,    2.195E+00,    3.661E+00,,     0.142
C,NB-94    ,NO ,   -1.642E+00,    1.721E+00,    2.699E+00,,    -0.608
C,NB-95    ,NO ,    1.567E+00,    1.826E+00,    3.117E+00,,     0.503
C,ZR-95    ,NO ,   -4.113E-01,    3.093E+00,    5.030E+00,,    -0.082
C,MO-99    ,NO ,    1.518E+00,    1.934E+01,    3.186E+01,,     0.048
C,RU-103   ,NO ,   -5.282E-01,    1.808E+00,    2.887E+00,,    -0.183
C,RU-106   ,NO ,   -1.424E+01,    1.655E+01,    2.635E+01,,    -0.540
C,AG-110m  ,NO ,    4.564E-01,    1.742E+00,    2.915E+00,,     0.157
C,SN-113   ,NO ,   -2.228E-01,    2.291E+00,    3.745E+00,,    -0.059
C,SB-124   ,NO ,    1.183E+00,    3.168E+00,    2.812E+00,,     0.421
C,SB-125   ,NO ,    4.347E+00,    5.023E+00,    8.478E+00,,     0.513
C,TE-129M  ,NO ,    2.273E+00,    2.087E+01,    3.408E+01,,     0.067
C,I-131    ,NO ,    1.208E+00,    1.925E+00,    3.242E+00,,     0.373
C,BA-133   ,NO ,   -2.535E-01,    2.657E+00,    3.745E+00,,    -0.068
C,CS-134   ,NO ,    1.059E+00,    2.303E+00,    2.902E+00,,     0.365
C,CS-136   ,NO ,    6.047E-02,    1.825E+00,    2.979E+00,,     0.020
C,CS-137   ,NO ,    2.669E-01,    1.932E+00,    3.213E+00,,     0.083
C,CE-139   ,NO ,    8.494E-01,    1.685E+00,    2.789E+00,,     0.305
C,BA-140   ,NO ,    1.788E-01,    6.701E+00,    1.123E+01,,     0.016
C,LA-140   ,NO ,    1.848E+00,    2.274E+00,    3.994E+00,,     0.463
C,CE-141   ,NO ,    1.689E+00,    3.138E+00,    4.932E+00,,     0.342
C,CE-144   ,NO ,   -8.613E-01,    1.340E+01,    2.081E+01,,    -0.041
C,EU-152   ,NO ,    7.326E-01,    5.803E+00,    9.187E+00,,     0.080
C,EU-154   ,NO ,    1.174E+00,    3.434E+00,    5.726E+00,,     0.205
C,RA-226   ,NO ,    2.790E+00,    5.408E+01,    7.500E+01,,     0.037
C,TH-232   ,NO ,    3.818E+00,    1.181E+01,    1.212E+01,,     0.315
C,U-238    ,NO ,    1.199E+02,    1.863E+02,    3.217E+02,,     0.373
C,AM-241   ,NO ,   -2.263E+01,    2.050E+01,    3.217E+01,,    -0.703
```

Sec. Review: VD Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 09:12:32.12
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 10-AUG-2006 18:09:58.30

LIMS No., Customer Name, Client ID: L29543-3 WG EX/DRES

Sample ID : 14L29543-3
Sample Type : WG
Quantity : 3.20130E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 9-AUG-2006 11:45:00.0
Geometry : 143L082304
BKGFILE : 14BG072806MT
Real Time : 0 08:00:04.99
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.35*	184	1364	1.89	133.83	5.12E-01	6.40E-03	40.6	1.11E+00
2	1	92.71*	32	998	1.68	186.80	1.28E+00	1.11E-03	196.1	7.46E-01
3	1	139.89*	215	919	1.57	281.60	1.89E+00	7.46E-03	27.3	1.45E+00
4	1	185.97*	123	1284	1.95	374.15	1.88E+00	4.26E-03	66.9	2.36E+00
5	1	198.63*	210	895	1.31	399.57	1.83E+00	7.28E-03	29.8	1.69E+00
6	0	238.14*	21	1055	1.40	478.89	1.68E+00	7.37E-04	337.9	
7	1	295.64*	124	506	1.45	594.29	1.46E+00	4.30E-03	37.0	1.36E+00
8	1	339.38	51	499	2.31	682.03	1.31E+00	1.78E-03	88.9	2.72E+00
9	1	352.52*	287	615	2.08	708.39	1.28E+00	9.97E-03	21.3	3.06E+00
10	1	596.00	121	288	2.73	1196.22	8.48E-01	4.20E-03	32.3	2.58E+00
11	1	609.55*	295	215	2.28	1223.35	8.33E-01	1.03E-02	13.3	1.40E+00
12	1	1120.74*	87	105	2.94	2244.43	5.30E-01	3.01E-03	30.0	1.03E+00
13	1	1377.41	32	67	1.38	2755.58	4.56E-01	1.10E-03	63.8	9.77E-01
14	1	1461.69*	45	93	2.44	2923.21	4.36E-01	1.58E-03	71.2	1.18E+00
15	1	1766.13*	50	84	3.19	3527.79	3.79E-01	1.74E-03	50.6	1.58E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	45	10.67*	4.361E-01	2.862E+01	2.862E+01	142.41
RA-226	186.21	123	3.28*	1.876E+00	5.842E+01	5.842E+01	133.78
TH-228	238.63	21	44.60*	1.677E+00	8.318E-01	8.330E-01	675.78
	240.98	------	3.95	1.666E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.907E+00	------	Line Not Found	------
	163.35	------	4.70	1.923E+00	------	Line Not Found	------
	185.71	123	54.00	1.876E+00	3.549E+00	3.549E+00	133.78
	205.31	------	4.70	1.809E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 14L29543-3

Acquisition date : 10-AUG-2006 18:09:58

Total number of lines in spectrum	15	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	3	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.862E+01	2.862E+01	4.076E+01	142.41	
RA-226	1600.00Y	1.00	5.842E+01	5.842E+01	7.815E+01	133.78	
TH-228	1.91Y	1.00	8.318E-01	8.330E-01	56.29E-01	675.78	
U-235	7.04E+08Y	1.00	3.549E+00	3.549E+00	4.747E+00	133.78	K
	Total Activity :		9.143E+01	9.143E+01			
	Grand Total Activity :		9.143E+01	9.143E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L29543-3

Acquisition date : 10-AUG-2006 18:09:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.35	184	1364	1.89	133.83	129	11	6.40E-03	81.2	5.12E-01	
1	92.71	32	998	1.68	186.80	182	9	1.11E-03	****	1.28E+00	
1	139.89	215	919	1.57	281.60	277	9	7.46E-03	54.5	1.89E+00	
1	198.63	210	895	1.31	399.57	394	11	7.28E-03	59.5	1.83E+00	
1	295.64	124	506	1.45	594.29	590	9	4.30E-03	74.1	1.46E+00	
1	339.38	51	499	2.31	682.03	674	12	1.78E-03	****	1.31E+00	
1	352.52	287	615	2.08	708.39	701	16	9.97E-03	42.6	1.28E+00	
1	596.00	121	288	2.73	1196.22	1190	15	4.20E-03	64.7	8.48E-01	
1	609.55	295	215	2.28	1223.35	1217	14	1.03E-02	26.7	8.33E-01	
1	1120.74	87	105	2.94	2244.43	2237	15	3.01E-03	60.0	5.30E-01	
1	1377.41	32	67	1.38	2755.58	2747	17	1.10E-03	****	4.56E-01	
1	1766.13	50	84	3.19	3527.79	3519	21	1.74E-03	****	3.79E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	3	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.862E+01	2.862E+01	4.076E+01	142.41	
RA-226	1600.00Y	1.00	5.842E+01	5.842E+01	7.815E+01	133.78	
TH-228	1.91Y	1.00	8.318E-01	8.330E-01	56.29E-01	675.78	
	Total Activity :		8.788E+01	8.788E+01			
	Grand Total Activity :		8.788E+01	8.788E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.862E+01	4.076E+01	2.419E+01	0.000E+00	1.183
RA-226	5.842E+01	7.815E+01	6.571E+01	0.000E+00	0.889
TH-228	8.330E-01	5.629E+00	5.303E+00	0.000E+00	0.157

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-3.138E+00		1.415E+01	2.328E+01	0.000E+00	-0.135
NA-24	2.692E+00		8.963E+00	1.279E+01	0.000E+00	0.210
CR-51	-2.084E-01		1.446E+01	2.337E+01	0.000E+00	-0.009
MN-54	9.821E-01		1.643E+00	2.828E+00	0.000E+00	0.347
CO-57	1.566E-01		1.697E+00	2.855E+00	0.000E+00	0.055
CO-58	-1.451E-01		1.724E+00	2.874E+00	0.000E+00	-0.050
FE-59	3.009E+00		3.157E+00	5.487E+00	0.000E+00	0.548
CO-60	-1.847E-02		1.645E+00	2.664E+00	0.000E+00	-0.007
ZN-65	-8.688E-01		3.982E+00	5.451E+00	0.000E+00	-0.159
SE-75	1.427E+00		2.250E+00	3.737E+00	0.000E+00	0.382
SR-85	4.995E+00		2.166E+00	3.809E+00	0.000E+00	1.311
Y-88	-1.171E+00		1.815E+00	2.797E+00	0.000E+00	-0.419
NB-94	-1.254E+00		1.716E+00	2.688E+00	0.000E+00	-0.466
NB-95	9.325E-01		1.736E+00	2.883E+00	0.000E+00	0.323
ZR-95	2.259E+00		2.994E+00	5.036E+00	0.000E+00	0.449
MO-99	1.408E+01		1.862E+01	3.132E+01	0.000E+00	0.450
RU-103	-5.078E-01		1.769E+00	2.897E+00	0.000E+00	-0.175
RU-106	-7.891E+00		1.582E+01	2.527E+01	0.000E+00	-0.312
AG-110m	-1.245E+00		1.685E+00	2.648E+00	0.000E+00	-0.470
SN-113	8.097E-01		2.166E+00	3.675E+00	0.000E+00	0.220
SB-124	1.462E+00		2.847E+00	2.679E+00	0.000E+00	0.545
SB-125	-5.740E+00		4.792E+00	7.647E+00	0.000E+00	-0.751
TE-129M	1.139E+01		1.940E+01	3.296E+01	0.000E+00	0.346
I-131	-1.108E+00		2.006E+00	3.158E+00	0.000E+00	-0.351
BA-133	1.595E-01		2.723E+00	3.784E+00	0.000E+00	0.042
CS-134	8.266E-01		2.204E+00	2.643E+00	0.000E+00	0.313
CS-136	-3.643E-01		1.820E+00	3.015E+00	0.000E+00	-0.121
CS-137	-1.095E-01		1.888E+00	3.069E+00	0.000E+00	-0.036
CE-139	-4.502E-01		1.683E+00	2.781E+00	0.000E+00	-0.162
BA-140	-3.568E+00		6.453E+00	1.039E+01	0.000E+00	-0.343
LA-140	1.421E+00		2.013E+00	3.512E+00	0.000E+00	0.404
CE-141	4.990E+00		3.151E+00	4.994E+00	0.000E+00	0.999
CE-144	2.948E+00		1.372E+01	2.182E+01	0.000E+00	0.135
EU-152	-8.539E-01		7.230E+00	8.667E+00	0.000E+00	-0.099
EU-154	2.059E-01		3.570E+00	6.001E+00	0.000E+00	0.034
AC-228	3.001E-01		7.531E+00	1.144E+01	0.000E+00	0.026
TH-232	2.999E-01		7.527E+00	1.143E+01	0.000E+00	0.026
U-235	-5.553E+00		1.568E+01	2.176E+01	0.000E+00	-0.255
U-238	-1.411E+01		1.756E+02	2.888E+02	0.000E+00	-0.049
AM-241	-6.262E+00		2.293E+01	3.696E+01	0.000E+00	-0.169

A,14L29543-3 ,08/11/2006 09:12,08/09/2006 11:45, 3.201E+00,L29543-3 WG EX
B,14L29543-3 ,LIBD ,08/07/2006 09:39,143L082304

C,K-40	,YES,	2.862E+01,	4.076E+01,	2.419E+01,,	1.183
C,RA-226	,YES,	5.842E+01,	7.815E+01,	6.571E+01,,	0.889
C,TH-228	,YES,	8.330E-01,	5.629E+00,	5.303E+00,,	0.157
C,BE-7	,NO ,	-3.138E+00,	1.415E+01,	2.328E+01,,	-0.135
C,NA-24	,NO ,	2.692E+00,	8.963E+00,	1.279E+01,,	0.210
C,CR-51	,NO ,	-2.084E-01,	1.446E+01,	2.337E+01,,	-0.009
C,MN-54	,NO ,	9.821E-01,	1.643E+00,	2.828E+00,,	0.347
C,CO-57	,NO ,	1.566E-01,	1.697E+00,	2.855E+00,,	0.055
C,CO-58	,NO ,	-1.451E-01,	1.724E+00,	2.874E+00,,	-0.050
C,FE-59	,NO ,	3.009E+00,	3.157E+00,	5.487E+00,,	0.548
C,CO-60	,NO ,	-1.847E-02,	1.645E+00,	2.664E+00,,	-0.007
C,ZN-65	,NO ,	-8.688E-01,	3.982E+00,	5.451E+00,,	-0.159
C,SE-75	,NO ,	1.427E+00,	2.250E+00,	3.737E+00,,	0.382
C,SR-85	,NO ,	4.995E+00,	2.166E+00,	3.809E+00,,	1.311
C,Y-88	,NO ,	-1.171E+00,	1.815E+00,	2.797E+00,,	-0.419
C,NB-94	,NO ,	-1.254E+00,	1.716E+00,	2.688E+00,,	-0.466
C,NB-95	,NO ,	9.325E-01,	1.736E+00,	2.883E+00,,	0.323
C,ZR-95	,NO ,	2.259E+00,	2.994E+00,	5.036E+00,,	0.449
C,MO-99	,NO ,	1.408E+01,	1.862E+01,	3.132E+01,,	0.450
C,RU-103	,NO ,	-5.078E-01,	1.769E+00,	2.897E+00,,	-0.175
C,RU-106	,NO ,	-7.891E+00,	1.582E+01,	2.527E+01,,	-0.312
C,AG-110m	,NO ,	-1.245E+00,	1.685E+00,	2.648E+00,,	-0.470
C,SN-113	,NO ,	8.097E-01,	2.166E+00,	3.675E+00,,	0.220
C,SB-124	,NO ,	1.462E+00,	2.847E+00,	2.679E+00,,	0.545
C,SB-125	,NO ,	-5.740E+00,	4.792E+00,	7.647E+00,,	-0.751
C,TE-129M	,NO ,	1.139E+01,	1.940E+01,	3.296E+01,,	0.346
C,I-131	,NO ,	-1.108E+00,	2.006E+00,	3.158E+00,,	-0.351
C,BA-133	,NO ,	1.595E-01,	2.723E+00,	3.784E+00,,	0.042
C,CS-134	,NO ,	8.266E-01,	2.204E+00,	2.643E+00,,	0.313
C,CS-136	,NO ,	-3.643E-01,	1.820E+00,	3.015E+00,,	-0.121
C,CS-137	,NO ,	-1.095E-01,	1.888E+00,	3.069E+00,,	-0.036
C,CE-139	,NO ,	-4.502E-01,	1.683E+00,	2.781E+00,,	-0.162
C,BA-140	,NO ,	-3.568E+00,	6.453E+00,	1.039E+01,,	-0.343
C,LA-140	,NO ,	1.421E+00,	2.013E+00,	3.512E+00,,	0.404
C,CE-141	,NO ,	4.990E+00,	3.151E+00,	4.994E+00,,	0.999
C,CE-144	,NO ,	2.948E+00,	1.372E+01,	2.182E+01,,	0.135
C,EU-152	,NO ,	-8.539E-01,	7.230E+00,	8.667E+00,,	-0.099
C,EU-154	,NO ,	2.059E-01,	3.570E+00,	6.001E+00,,	0.034
C,AC-228	,NO ,	3.001E-01,	7.531E+00,	1.144E+01,,	0.026
C,TH-232	,NO ,	2.999E-01,	7.527E+00,	1.143E+01,,	0.026
C,U-235	,NO ,	-5.553E+00,	1.568E+01,	2.176E+01,,	-0.255
C,U-238	,NO ,	-1.411E+01,	1.756E+02,	2.888E+02,,	-0.049
C,AM-241	,NO ,	-6.262E+00,	2.293E+01,	3.696E+01,,	-0.169

Sec. Review: Analyst: LIMS: V

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 12:06:27.21
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 11-AUG-2006 10:16:13.73

LIMS No., Customer Name, Client ID: L29543-4 WG EX/DRES

Sample ID : 04L29543-4
Sample Type : WG
Quantity : 3.11820E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 9-AUG-2006 13:35:00.0
Geometry : 043L082004
BKGFILE : 04BG072806MT
Real Time : 0 01:50:02.97
Live time : 0 01:50:01.72

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	92.49*	20	146	1.38	185.98	1.53E+00	3.03E-03	116.0	7.48E-01
2	1	139.55*	45	136	1.39	280.19	2.04E+00	6.82E-03	46.4	1.65E+00
3	1	198.32*	45	154	1.31	397.84	1.87E+00	6.86E-03	54.1	1.37E+00
4	1	239.61	49	184	1.14	480.47	1.68E+00	7.37E-03	60.2	7.57E+00
5	1	351.46*	139	107	1.49	704.30	1.28E+00	2.10E-02	18.6	2.76E+00
6	1	582.59*	26	15	3.01	1166.71	8.78E-01	3.89E-03	38.7	1.64E+00
7	1	608.88*	151	45	1.65	1219.30	8.49E-01	2.29E-02	13.1	1.37E+00
8	1	1120.12*	43	14	2.65	2241.38	5.27E-01	6.59E-03	24.5	1.63E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	49	44.60*	1.675E+00	8.554E+00	8.571E+00	120.31
	240.98	------	3.95	1.669E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L29543-4

Acquisition date : 11-AUG-2006 10:16:13

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	8.554E+00	8.571E+00	10.31E+00	120.31	
	Total Activity :		8.554E+00	8.571E+00			
	Grand Total Activity :		8.554E+00	8.571E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 04L29543-4 Acquisition date : 11-AUG-2006 10:16:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	92.49	20	146	1.38	185.98	183	8	3.03E-03	****	1.53E+00	
1	139.55	45	136	1.39	280.19	277	7	6.82E-03	92.8	2.04E+00	
1	198.32	45	154	1.31	397.84	394	10	6.86E-03	****	1.87E+00	
1	351.46	139	107	1.49	704.30	699	14	2.10E-02	37.1	1.28E+00	
1	582.59	26	15	3.01	1166.71	1161	10	3.89E-03	77.4	8.78E-01	T
1	608.88	151	45	1.65	1219.30	1213	14	2.29E-02	26.2	8.49E-01	
1	1120.12	43	14	2.65	2241.38	2234	14	6.59E-03	49.0	5.27E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	8	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	2	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	8.554E+00	8.571E+00	10.31E+00	120.31	
	Total Activity :		8.554E+00	8.571E+00			
Grand Total Activity :			8.554E+00	8.571E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	8.571E+00	1.031E+01	7.677E+00	0.000E+00	1.116

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.201E+01		2.325E+01	3.536E+01	0.000E+00	-0.340
NA-24	6.550E+00		2.511E+01	4.357E+01	0.000E+00	0.150
K-40	-3.386E+01		4.086E+01	7.752E+01	0.000E+00	-0.437
CR-51	1.477E+01		2.508E+01	4.355E+01	0.000E+00	0.339

MN-54	4.101E-01	3.159E+00	5.285E+00	0.000E+00	0.078
CO-57	-3.918E-01	2.525E+00	4.071E+00	0.000E+00	-0.096
CO-58	-9.943E-01	2.788E+00	4.365E+00	0.000E+00	-0.228
FE-59	2.316E+00	5.076E+00	8.861E+00	0.000E+00	0.261
CO-60	-8.975E-01	3.523E+00	6.229E+00	0.000E+00	-0.144
ZN-65	6.882E+00	6.564E+00	1.140E+01	0.000E+00	0.604
SE-75	-1.610E+00	3.656E+00	5.950E+00	0.000E+00	-0.271
SR-85	-1.530E+01	4.263E+00	4.816E+00	0.000E+00	-3.177
Y-88	4.419E-01	3.515E+00	5.836E+00	0.000E+00	0.076
NB-94	3.548E-01	2.650E+00	4.492E+00	0.000E+00	0.079
NB-95	2.204E+00	3.217E+00	5.731E+00	0.000E+00	0.385
ZR-95	1.591E+00	4.871E+00	8.425E+00	0.000E+00	0.189
MO-99	8.361E+00	3.616E+01	6.172E+01	0.000E+00	0.135
RU-103	2.815E+00	3.121E+00	5.502E+00	0.000E+00	0.512
RU-106	-3.151E+01	2.679E+01	3.882E+01	0.000E+00	-0.812
AG-110m	1.217E+00	2.712E+00	4.780E+00	0.000E+00	0.255
SN-113	9.058E-01	3.760E+00	6.309E+00	0.000E+00	0.144
SB-124	-1.642E+00	3.192E+00	4.308E+00	0.000E+00	-0.381
SB-125	3.843E+00	6.873E+00	1.195E+01	0.000E+00	0.321
TE-129M	1.659E+01	3.268E+01	5.593E+01	0.000E+00	0.297
I-131	2.023E+00	3.192E+00	5.571E+00	0.000E+00	0.363
BA-133	-5.404E+00	4.607E+00	5.685E+00	0.000E+00	-0.950
CS-134	-2.111E+00	3.098E+00	4.045E+00	0.000E+00	-0.522
CS-136	-1.455E+00	2.867E+00	4.358E+00	0.000E+00	-0.334
CS-137	1.274E+00	3.006E+00	5.282E+00	0.000E+00	0.241
CE-139	-5.452E-01	2.717E+00	4.299E+00	0.000E+00	-0.127
BA-140	-3.706E-01	9.389E+00	1.500E+01	0.000E+00	-0.025
LA-140	5.685E-01	3.873E+00	6.519E+00	0.000E+00	0.087
CE-141	3.523E-01	4.583E+00	7.437E+00	0.000E+00	0.047
CE-144	-8.204E+00	2.074E+01	3.280E+01	0.000E+00	-0.250
EU-152	-2.209E+00	8.701E+00	1.409E+01	0.000E+00	-0.157
EU-154	-4.294E+00	5.458E+00	8.437E+00	0.000E+00	-0.509
RA-226	7.059E+00	7.156E+01	1.189E+02	0.000E+00	0.059
AC-228	2.560E+00	1.071E+01	1.953E+01	0.000E+00	0.131
TH-232	2.559E+00	1.070E+01	1.952E+01	0.000E+00	0.131
U-235	1.552E+01	2.285E+01	3.478E+01	0.000E+00	0.446
U-238	9.661E+00	3.423E+02	5.580E+02	0.000E+00	0.017
AM-241	5.121E+00	2.652E+01	4.499E+01	0.000E+00	0.114

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A,04L29543-4       ,08/11/2006 12:06,08/09/2006 13:35,   3.118E+00,L29543-4 WG EX
B,04L29543-4       ,LIBD                ,08/11/2006 09:46,043L082004
C,TH-228   ,YES,    8.571E+00,    1.031E+01,    7.677E+00,,     1.116
C,BE-7     ,NO ,   -1.201E+01,    2.325E+01,    3.536E+01,,    -0.340
C,NA-24    ,NO ,    6.550E+00,    2.511E+01,    4.357E+01,,     0.150
C,K-40     ,NO ,   -3.386E+01,    4.086E+01,    7.752E+01,,    -0.437
C,CR-51    ,NO ,    1.477E+01,    2.508E+01,    4.355E+01,,     0.339
C,MN-54    ,NO ,    4.101E-01,    3.159E+00,    5.285E+00,,     0.078
C,CO-57    ,NO ,   -3.918E-01,    2.525E+00,    4.071E+00,,    -0.096
C,CO-58    ,NO ,   -9.943E-01,    2.788E+00,    4.365E+00,,    -0.228
C,FE-59    ,NO ,    2.316E+00,    5.076E+00,    8.861E+00,,     0.261
C,CO-60    ,NO ,   -8.975E-01,    3.523E+00,    6.229E+00,,    -0.144
C,ZN-65    ,NO ,    6.882E+00,    6.564E+00,    1.140E+01,,     0.604
C,SE-75    ,NO ,   -1.610E+00,    3.656E+00,    5.950E+00,,    -0.271
C,SR-85    ,NO ,   -1.530E+01,    4.263E+00,    4.816E+00,,    -3.177
C,Y-88     ,NO ,    4.419E-01,    3.515E+00,    5.836E+00,,     0.076
C,NB-94    ,NO ,    3.548E-01,    2.650E+00,    4.492E+00,,     0.079
C,NB-95    ,NO ,    2.204E+00,    3.217E+00,    5.731E+00,,     0.385
C,ZR-95    ,NO ,    1.591E+00,    4.871E+00,    8.425E+00,,     0.189
C,MO-99    ,NO ,    8.361E+00,    3.616E+01,    6.172E+01,,     0.135
C,RU-103   ,NO ,    2.815E+00,    3.121E+00,    5.502E+00,,     0.512
C,RU-106   ,NO ,   -3.151E+01,    2.679E+01,    3.882E+01,,    -0.812
C,AG-110m  ,NO ,    1.217E+00,    2.712E+00,    4.780E+00,,     0.255
C,SN-113   ,NO ,    9.058E-01,    3.760E+00,    6.309E+00,,     0.144
C,SB-124   ,NO ,   -1.642E+00,    3.192E+00,    4.308E+00,,    -0.381
C,SB-125   ,NO ,    3.843E+00,    6.873E+00,    1.195E+01,,     0.321
C,TE-129M  ,NO ,    1.659E+01,    3.268E+01,    5.593E+01,,     0.297
C,I-131    ,NO ,    2.023E+00,    3.192E+00,    5.571E+00,,     0.363
C,BA-133   ,NO ,   -5.404E+00,    4.607E+00,    5.685E+00,,    -0.950
C,CS-134   ,NO ,   -2.111E+00,    3.098E+00,    4.045E+00,,    -0.522
C,CS-136   ,NO ,   -1.455E+00,    2.867E+00,    4.358E+00,,    -0.334
C,CS-137   ,NO ,    1.274E+00,    3.006E+00,    5.282E+00,,     0.241
C,CE-139   ,NO ,   -5.452E-01,    2.717E+00,    4.299E+00,,    -0.127
C,BA-140   ,NO ,   -3.706E-01,    9.389E+00,    1.500E+01,,    -0.025
C,LA-140   ,NO ,    5.685E-01,    3.873E+00,    6.519E+00,,     0.087
C,CE-141   ,NO ,    3.523E-01,    4.583E+00,    7.437E+00,,     0.047
C,CE-144   ,NO ,   -8.204E+00,    2.074E+01,    3.280E+01,,    -0.250
C,EU-152   ,NO ,   -2.209E+00,    8.701E+00,    1.409E+01,,    -0.157
C,EU-154   ,NO ,   -4.294E+00,    5.458E+00,    8.437E+00,,    -0.509
C,RA-226   ,NO ,    7.059E+00,    7.156E+01,    1.189E+02,,     0.059
C,AC-228   ,NO ,    2.560E+00,    1.071E+01,    1.953E+01,,     0.131
C,TH-232   ,NO ,    2.559E+00,    1.070E+01,    1.952E+01,,     0.131
C,U-235    ,NO ,    1.552E+01,    2.285E+01,    3.478E+01,,     0.446
C,U-238    ,NO ,    9.661E+00,    3.423E+02,    5.580E+02,,     0.017
C,AM-241   ,NO ,    5.121E+00,    2.652E+01,    4.499E+01,,     0.114
```

Sec. Review: Analyst: LIMS:

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 11:40:44.26
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 11-AUG-2006 10:16:14.61

LIMS No., Customer Name, Client ID: L29543-5 WG EX/DRES

Sample ID	: 07L29543-5			Smple Date:	9-AUG-2006 13:50:00.0
Sample Type	: WG			Geometry	: 073L082504
Quantity	: 3.14630E+00 L			BKGFILE	: 07BG072806MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 01:24:22.31
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 01:24:21.23
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.33*	36	131	1.26	133.38	8.06E-01	7.03E-03	57.1	3.66E+00
2	1	294.83*	74	97	1.25	591.41	1.81E+00	1.46E-02	28.0	3.33E+00
3	1	351.73*	154	63	1.68	705.42	1.61E+00	3.05E-02	13.7	1.94E+00
4	1	608.89*	106	45	1.50	1220.47	1.09E+00	2.10E-02	17.0	1.50E+00
5	1	1765.01*	32	3	2.81	3531.45	5.12E-01	6.30E-03	26.7	1.65E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29543-5 Acquisition date : 11-AUG-2006 10:16:14

Total number of lines in spectrum	5	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 3
Sample ID : 07L29543-5 Acquisition date : 11-AUG-2006 10:16:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.33	36	131	1.26	133.38	131	7	7.03E-03	****	8.06E-01	
1	294.83	74	97	1.25	591.41	586	10	1.46E-02	56.0	1.81E+00	
1	351.73	154	63	1.68	705.42	700	12	3.05E-02	27.5	1.61E+00	
1	608.89	106	45	1.50	1220.47	1214	12	2.10E-02	33.9	1.09E+00	
1	1765.01	32	3	2.81	3531.45	3522	16	6.30E-03	53.3	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 5
Number of unidentified lines 5
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.224E+00		2.335E+01	3.760E+01	0.000E+00	-0.033
NA-24	-1.019E+00		2.615E+01	4.340E+01	0.000E+00	-0.023
K-40	-5.670E+00		4.107E+01	8.573E+01	0.000E+00	-0.066
CR-51	4.826E+00		2.425E+01	4.087E+01	0.000E+00	0.118
MN-54	-1.880E+00		2.507E+00	3.639E+00	0.000E+00	-0.517
CO-57	1.871E+00		2.745E+00	4.631E+00	0.000E+00	0.404
CO-58	2.220E+00		2.868E+00	5.218E+00	0.000E+00	0.426
FE-59	3.232E-01		5.168E+00	8.474E+00	0.000E+00	0.038
CO-60	-2.234E-01		2.979E+00	4.921E+00	0.000E+00	-0.045
ZN-65	-9.056E+00		6.943E+00	8.861E+00	0.000E+00	-1.022
SE-75	7.311E-01		3.451E+00	5.873E+00	0.000E+00	0.124
SR-85	-1.247E+01		4.076E+00	4.834E+00	0.000E+00	-2.579
Y-88	-2.080E+00		3.023E+00	4.057E+00	0.000E+00	-0.513
NB-94	-5.331E-01		2.600E+00	4.237E+00	0.000E+00	-0.126
NB-95	2.573E+00		3.056E+00	5.563E+00	0.000E+00	0.463
ZR-95	-1.626E+00		4.439E+00	6.988E+00	0.000E+00	-0.233
MO-99	-6.177E+00		3.263E+01	5.304E+01	0.000E+00	-0.116
RU-103	-2.437E+00		2.797E+00	4.022E+00	0.000E+00	-0.606
RU-106	2.182E+01		2.722E+01	4.968E+01	0.000E+00	0.439
AG-110m	-2.680E+00		2.431E+00	3.436E+00	0.000E+00	-0.780
SN-113	-1.642E-01		3.526E+00	5.753E+00	0.000E+00	-0.029
SB-124	-1.336E+00		3.270E+00	4.206E+00	0.000E+00	-0.318
SB-125	7.332E+00		7.717E+00	1.385E+01	0.000E+00	0.529

TE-129M	-3.197E+00	3.395E+01	5.458E+01	0.000E+00	-0.059
I-131	5.857E-01	3.360E+00	5.620E+00	0.000E+00	0.104
BA-133	-4.246E+00	4.317E+00	5.386E+00	0.000E+00	-0.788
CS-134	-9.676E-01	3.336E+00	4.403E+00	0.000E+00	-0.220
CS-136	1.215E+00	2.644E+00	4.684E+00	0.000E+00	0.259
CS-137	1.337E+00	2.828E+00	5.023E+00	0.000E+00	0.266
CE-139	-2.155E-02	2.964E+00	4.714E+00	0.000E+00	-0.005
BA-140	6.151E-01	1.103E+01	1.787E+01	0.000E+00	0.034
LA-140	-1.078E+00	3.245E+00	4.955E+00	0.000E+00	-0.217
CE-141	-2.499E+00	4.899E+00	7.557E+00	0.000E+00	-0.331
CE-144	1.659E+01	2.125E+01	3.594E+01	0.000E+00	0.462
EU-152	-2.697E+00	8.799E+00	1.413E+01	0.000E+00	-0.191
EU-154	1.129E+00	5.854E+00	9.559E+00	0.000E+00	0.118
RA-226	-5.781E+01	7.897E+01	1.269E+02	0.000E+00	-0.456
AC-228	8.295E+00	1.247E+01	2.389E+01	0.000E+00	0.347
TH-228	-3.627E+00	5.745E+00	9.829E+00	0.000E+00	-0.369
TH-232	8.290E+00	1.246E+01	2.387E+01	0.000E+00	0.347
U-235	-1.196E+01	2.222E+01	3.452E+01	0.000E+00	-0.346
U-238	1.923E+01	2.872E+02	4.787E+02	0.000E+00	0.040
AM-241	1.857E+01	2.559E+01	4.430E+01	0.000E+00	0.419

A,07L29543-5 ,08/11/2006 11:40,08/09/2006 13:50, 3.146E+00,L29543-5 WG EX
B,07L29543-5 ,LIBD ,08/11/2006 09:47,073L082504

C,BE-7	,NO ,	-1.224E+00,	2.335E+01,	3.760E+01,,	-0.033
C,NA-24	,NO ,	-1.019E+00,	2.615E+01,	4.340E+01,,	-0.023
C,K-40	,NO ,	-5.670E+00,	4.107E+01,	8.573E+01,,	-0.066
C,CR-51	,NO ,	4.826E+00,	2.425E+01,	4.087E+01,,	0.118
C,MN-54	,NO ,	-1.880E+00,	2.507E+00,	3.639E+00,,	-0.517
C,CO-57	,NO ,	1.871E+00,	2.745E+00,	4.631E+00,,	0.404
C,CO-58	,NO ,	2.220E+00,	2.868E+00,	5.218E+00,,	0.426
C,FE-59	,NO ,	3.232E-01,	5.168E+00,	8.474E+00,,	0.038
C,CO-60	,NO ,	-2.234E-01,	2.979E+00,	4.921E+00,,	-0.045
C,ZN-65	,NO ,	-9.056E+00,	6.943E+00,	8.861E+00,,	-1.022
C,SE-75	,NO ,	7.311E-01,	3.451E+00,	5.873E+00,,	0.124
C,SR-85	,NO ,	-1.247E+01,	4.076E+00,	4.834E+00,,	-2.579
C,Y-88	,NO ,	-2.080E+00,	3.023E+00,	4.057E+00,,	-0.513
C,NB-94	,NO ,	-5.331E-01,	2.600E+00,	4.237E+00,,	-0.126
C,NB-95	,NO ,	2.573E+00,	3.056E+00,	5.563E+00,,	0.463
C,ZR-95	,NO ,	-1.626E+00,	4.439E+00,	6.988E+00,,	-0.233
C,MO-99	,NO ,	-6.177E+00,	3.263E+01,	5.304E+01,,	-0.116
C,RU-103	,NO ,	-2.437E+00,	2.797E+00,	4.022E+00,,	-0.606
C,RU-106	,NO ,	2.182E+01,	2.722E+01,	4.968E+01,,	0.439
C,AG-110m	,NO ,	-2.680E+00,	2.431E+00,	3.436E+00,,	-0.780
C,SN-113	,NO ,	-1.642E-01,	3.526E+00,	5.753E+00,,	-0.029
C,SB-124	,NO ,	-1.336E+00,	3.270E+00,	4.206E+00,,	-0.318
C,SB-125	,NO ,	7.332E+00,	7.717E+00,	1.385E+01,,	0.529
C,TE-129M	,NO ,	-3.197E+00,	3.395E+01,	5.458E+01,,	-0.059
C,I-131	,NO ,	5.857E-01,	3.360E+00,	5.620E+00,,	0.104
C,BA-133	,NO ,	-4.246E+00,	4.317E+00,	5.386E+00,,	-0.788
C,CS-134	,NO ,	-9.676E-01,	3.336E+00,	4.403E+00,,	-0.220
C,CS-136	,NO ,	1.215E+00,	2.644E+00,	4.684E+00,,	0.259
C,CS-137	,NO ,	1.337E+00,	2.828E+00,	5.023E+00,,	0.266
C,CE-139	,NO ,	-2.155E-02,	2.964E+00,	4.714E+00,,	-0.005
C,BA-140	,NO ,	6.151E-01,	1.103E+01,	1.787E+01,,	0.034
C,LA-140	,NO ,	-1.078E+00,	3.245E+00,	4.955E+00,,	-0.217
C,CE-141	,NO ,	-2.499E+00,	4.899E+00,	7.557E+00,,	-0.331
C,CE-144	,NO ,	1.659E+01,	2.125E+01,	3.594E+01,,	0.462
C,EU-152	,NO ,	-2.697E+00,	8.799E+00,	1.413E+01,,	-0.191
C,EU-154	,NO ,	1.129E+00,	5.854E+00,	9.559E+00,,	0.118
C,RA-226	,NO ,	-5.781E+01,	7.897E+01,	1.269E+02,,	-0.456
C,AC-228	,NO ,	8.295E+00,	1.247E+01,	2.389E+01,,	0.347
C,TH-228	,NO ,	-3.627E+00,	5.745E+00,	9.829E+00,,	-0.369
C,TH-232	,NO ,	8.290E+00,	1.246E+01,	2.387E+01,,	0.347
C,U-235	,NO ,	-1.196E+01,	2.222E+01,	3.452E+01,,	-0.346
C,U-238	,NO ,	1.923E+01,	2.872E+02,	4.787E+02,,	0.040
C,AM-241	,NO ,	1.857E+01,	2.559E+01,	4.430E+01,,	0.419

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29557

Exelon

August 16, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29557
EX001-3ESPDRES-06

08/16/2006 10:29

Sample Receipt

The following samples were received on August 11, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-112S-081006-GL-013	L29557-1	
WG-DN-MW-DN-112I-081006-GL-014	L29557-2	
WG-DN-MW-DN-117I-081006-GL-015	L29557-3	
WG-DN-MW-DN-118S-081006-GL-016	L29557-4	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3 (DIST)	TBE-2010	
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29557
EX001-3ESPDRES-06

08/16/2006 10:29

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4311.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-112S-081006-GL-013	L29557-1	WG4311-1

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4307.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-113S-080906-GL-008	L29543-1	WG4307-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29557
EX001-3ESPDRES-06

08/16/2006 10:29

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4323.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	WG4323-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

08/11/06 10:00

SR #: SR09882

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Client: Exelon

Project #: EX001-3ESPDRES-06

LIMS #: L29557

Initiated By: PMARSHALL
Init Date: 08/11/06 Receive Date: 08/11/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes	No	NA	Comment
1	Shipping container custody seals present and intact.			NA	
2	Sample container custody seals present and intact.			NA	
3	Sample containers received in good condition	Y			
4	Chain of custody received with samples	Y			
5	All samples listed on chain of custody received	Y			
6	Sample container labels present and legible.	Y			
7	Information on container labels correspond with chain of custody	Y			
8	Sample(s) properly preserved and in appropriate container(s)		N		Approx. 5mL of nitric acid was required to bring pH to 2 or below.
9	Other (Describe) WG-DN-MW-DN-117I-081006-GL-015		N		Only approx. 2 L of sample received for Gamma/Sr-90 analysis. No signs of leakage during shipment.

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXCELON / DRESDEN FACILITY

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** GREGORY TLEWIS

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: GAMMA SPEC	SR 89/90	TRITIUM	REMARKS
	8-10-06	1105	WG-DN-MW-DN-1123-081006-GL-013	H_2O	2	*	*	*	
		1210	-112I-		2	*	*	*	
		1420	-117I-		2	*	*	*	
		1600	-118S-		2	*	*	*	

-014 -015 -016

TOTAL NUMBER OF CONTAINERS 8

RELINQUISHED BY: ① [signature]	DATE: 8-10-06 TIME: 1640	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 453291187945

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: G. LEWIS, R. NACHETT

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 8/11/06 TIME: 1030

004759

1001-00(SOURCE)GN-CO004

8/11/06

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

August 11, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on August 11, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by August 16, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-MW-DN-112S-081006-GL-0	**L29557-1**		**08/10/06:1105**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-112I-081006-GL-0	**L29557-2**		**08/10/06:1210**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-117I-081006-GL-0	**L29557-3**		**08/10/06:1420**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-118S-081006-GL-0	**L29557-4**		**08/10/06:1600**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		

Internal Chain of Custody

08/16/06 10:17 Teledyne Brown Engineering

Internal Chain of Custody

****

Sample # L29557-1 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:12	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:12	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-1 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:22	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:13	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:14	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-2 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:12	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:12	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-2 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:22	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen

****

Sample # L29557-2 Containernum 2

Relinquish Date			Received By	
08/14/2006 08:13	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:14	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-3 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:12	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:12	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-3 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:22	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:13	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:14	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-4 Containernum 1

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:23	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:12	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:12	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29557-4 Containernum 2

Prod	Analyst
GELI	DW
H-3 (DIST)	DW
SR-90 (FAST)	LCB

Internal Chain of Custody

****

Sample # L29557-4 Containernum 2

Relinquish Date	Relinquish By		Received By	
08/11/2006 00:00			099999	Sample Custodian
08/11/2006 11:22	099999	Sample Custodian	030854	Donna Webb
08/14/2006 08:11	030854	Donna Webb	029728	Lauren Larsen
08/14/2006 08:13	029728	Lauren Larsen	030854	Donna Webb
08/14/2006 08:14	030854	Donna Webb	099999	Sample Custodian

08/16/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29557

****

L29557-1 **WG** **WG-DN-MW-DN-112S-081006-GL-013**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/11/06
Aliquot	GELI	DW	08/11/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/12/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29557-2 **WG** **WG-DN-MW-DN-112I-081006-GL-014**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/11/06
Aliquot	GELI	DW	08/11/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/12/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29557-3 **WG** **WG-DN-MW-DN-117I-081006-GL-015**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/11/06
Aliquot	GELI	DW	08/11/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/12/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29557-4 **WG** **WG-DN-MW-DN-118S-081006-GL-016**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/11/06
Aliquot	GELI	DW	08/11/06
Aliquot	H-3 (DIST)	DW	08/11/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Count Room	GELI	ILL	08/11/06
Count Room	H-3 (DIST)	KOJ	08/12/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

Analytical Results Summary

Report of Analysis

08/16/06 10:00

L29557

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-112S-081006-GL-013** Collect Start: 08/10/2006 11:05 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/11/2006 % Moisture:
LIMS Number: L29557-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	6.67E+01	1.14E+02	**1.81E+02**	pCi/L		10	ml		08/12/06	60	M	U		
TOTAL SR	2018	5.34E-01	6.46E-01	**1.25E+00**	pCi/L		450	ml	08/10/06 11:05	08/15/06	80	M	U		
MN-54	2007	-1.52E+00	3.46E+00	**5.36E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
CO-58	2007	-1.39E-01	3.47E+00	**5.63E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
FE-59	2007	2.14E+00	6.74E+00	**1.17E+01**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
CO-60	2007	-4.99E-02	3.57E+00	**5.88E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
ZN-65	2007	-1.38E+00	8.29E+00	**1.16E+01**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
NB-95	2007	6.19E+00	4.10E+00	**6.88E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
ZR-95	2007	9.24E-01	5.84E+00	**9.70E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
CS-134	2007	-2.34E+00	4.18E+00	**5.64E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
CS-137	2007	1.73E+00	3.82E+00	**5.80E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
BA-140	2007	4.50E+00	1.25E+01	**2.14E+01**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No
LA-140	2007	1.01E+00	4.53E+00	**7.63E+00**	pCi/L		3245.69	ml	08/10/06 13:05	08/11/06	7843	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 10:00

L29557

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-112I-081006-GL-014** (WG)
Station:
Description:
LIMS Number: L29557-2

Collect Start: 08/10/2006 12:10
Collect Stop:
Receive Date: 08/11/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**1.52E+03**	2.14E+02	2.16E+02	pCi/L		10	ml		08/12/06	41.24	M	+		
TOTAL SR	2018	1.49E+00	9.57E-01	**1.72E+00**	pCi/L		450	ml	08/10/06 12:10	08/15/06	80	M	U		
MN-54	2007	-1.20E+00	3.87E+00	**6.00E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
CO-58	2007	2.70E-02	3.91E+00	**6.45E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
FE-59	2007	1.12E+00	7.55E+00	**1.26E+01**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
CO-60	2007	6.39E-01	4.36E+00	**8.44E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
ZN-65	2007	-5.43E+00	8.73E+00	**1.19E+01**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
NB-95	2007	-1.48E+00	3.64E+00	**5.57E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
ZR-95	2007	-5.21E+00	6.67E+00	**9.39E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
CS-134	2007	1.27E+00	4.24E+00	**6.59E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
CS-137	2007	-7.55E-03	4.25E+00	**7.12E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
BA-140	2007	4.39E+00	1.40E+01	**2.37E+01**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No
LA-140	2007	-4.83E+00	5.89E+00	**7.59E+00**	pCi/L		3062.45	ml	08/10/06 12:10	08/11/06	3661	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 10:00

L29557

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-117I-081006-GL-015** Collect Start: 08/10/2006 14:20 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/11/2006 % Moisture:
LIMS Number: L29557-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**1.03E+03**	1.70E+02	1.89E+02	pCi/L		10	ml		08/12/06	54.73	M	+		
TOTAL SR	2018	-9.74E-02	7.66E-01	**1.65E+00**	pCi/L		450	ml	08/10/06 14:20	08/15/06	80	M	U		
MN-54	2007	-9.92E-02	1.42E+00	**2.47E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
CO-58	2007	-6.70E-01	1.34E+00	**2.30E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
FE-59	2007	-3.22E-01	2.73E+00	**4.69E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
CO-60	2007	4.50E-01	1.50E+00	**2.62E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
ZN-65	2007	9.62E-01	3.27E+00	**4.99E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
NB-95	2007	8.75E-01	1.45E+00	**2.44E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
ZR-95	2007	-9.08E-01	2.55E+00	**4.14E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
CS-134	2007	-3.84E-03	1.76E+00	**2.55E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
CS-137	2007	-1.21E+00	1.63E+00	**2.63E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
BA-140	2007	1.24E+00	5.63E+00	**9.44E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No
LA-140	2007	-1.73E+00	1.76E+00	**2.83E+00**	pCi/L		1002.5	ml	08/10/06 14:20	08/11/06	87634	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 10:00

L29557

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-118S-081006-GL-016** (WG)
Station:
Description:
LIMS Number: L29557-4

Collect Start: 08/10/2006 16:00
Collect Stop:
Receive Date: 08/11/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**1.65E+03**	2.27E+02	2.25E+02	pCi/L		10	ml		08/12/06	39.59	M	+		
TOTAL SR	2018	9.43E-02	9.24E-01	**1.75E+00**	pCi/L		450	ml	08/10/06 16:00	08/15/06	200	M	U		
MN-54	2007	1.34E+00	3.66E+00	**6.36E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
CO-58	2007	6.50E-01	3.03E+00	**5.20E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
FE-59	2007	-8.20E-01	6.46E+00	**1.02E+01**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
CO-60	2007	2.32E+00	3.50E+00	**6.58E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
ZN-65	2007	4.66E+00	6.66E+00	**1.13E+01**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
NB-95	2007	5.71E+00	3.76E+00	**6.98E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
ZR-95	2007	-2.27E+00	6.06E+00	**9.54E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
CS-134	2007	7.60E-01	3.58E+00	**5.20E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
CS-137	2007	7.97E-01	3.82E+00	**6.57E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
BA-140	2007	8.80E+00	1.27E+01	**2.24E+01**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No
LA-140	2007	3.21E+00	4.40E+00	**8.28E+00**	pCi/L		3015.87	ml	08/10/06 16:00	08/11/06	3901	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L29557

8/16/2006 10:17:12AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4307-1	H-3 (DIST)	WO	08/11/2006 15:18	< 1.780E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4307-2	H-3 (DIST)	WO	08/11/2006 16:22	5.05E+002	4.620E+02	pCi/Total	91.5	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4307-3 L29543-1	H-3 (DIST)	WG	08/11/2006 16:42	4.510E+02	4.960E+02	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L29557

8/16/2006 10:17:12AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4323-1	TOTAL SR	WO	08/15/2006 18:45	< 7.680E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4323-2	TOTAL SR	WO	08/15/2006 18:45	5.84E+001	6.350E+01	pCi/Total	108.8	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4323-3 L29576-1	TOTAL SR	WG	08/15/2006 18:45	< 1.440E+00	< 1.700E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Aug 16 2006, 10:16 am

Work Order: *L29557* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29557-1		H-3 DIST					0		12-aug-06	LS7	136	60	1.95	60	.209		DW
				10 ml					09:01								
WG-DN-MW-DN-112S-081006-GL-013																	
Activity: 6.67E+01 Error: 1.14E+02 MDC: 1.81E+02 *																	
L29557-2		H-3 DIST					0		12-aug-06	LS7	375	41.24	1.95	60	.212		DW
				10 ml					10:05								
WG-DN-MW-DN-112I-081006-GL-014																	
Activity: 1.52E+03 * Error: 2.14E+02 MDC: 2.16E+02																	
L29557-3		H-3 DIST					0		12-aug-06	LS7	369	54.73	1.95	60	.209		DW
				10 ml					10:50								
WG-DN-MW-DN-117I-081006-GL-015																	
Activity: 1.03E+03 * Error: 1.7E+02 MDC: 1.89E+02																	
L29557-4		H-3 DIST					0		12-aug-06	LS7	377	39.59	1.95	60	.207		DW
				10 ml					11:49								
WG-DN-MW-DN-118S-081006-GL-016																	
Activity: 1.65E+03 * Error: 2.27E+02 MDC: 2.25E+02																	

Work Order: *L29557* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29557-1		TOTAL SR	10-aug-06 11:05	450 ml	15-aug-06 13:45		0	106.59	15-aug-06 18:45	X2D	77	80	307	400	.343	1	LCB
WG-DN-MW-DN-112S-081006-GL-013																	
Activity: 5.34E-01 Error: 6.46E-01 MDC: 1.25E+00 *																	
L29557-2		TOTAL SR	10-aug-06 12:10	450 ml	15-aug-06 13:45		0	85.99	15-aug-06 18:45	X3A	107	80	363	400	.335	1	LCB
WG-DN-MW-DN-112I-081006-GL-014																	
Activity: 1.49E+00 Error: 9.57E-01 MDC: 1.72E+00 *																	
L29557-3		TOTAL SR	10-aug-06 14:20	450 ml	15-aug-06 13:45		0	82.42	15-aug-06 18:45	X3B	62	80	321	400	.343	1	LCB
WG-DN-MW-DN-117I-081006-GL-015																	
Activity: -9.74E-02 Error: 7.66E-01 MDC: 1.65E+00 *																	
L29557-4		TOTAL SR	10-aug-06 16:00	450 ml	15-aug-06 13:45		0	44.51	15-aug-06 20:45	X4A	145	200	284	400	.358	1	LCB
WG-DN-MW-DN-118S-081006-GL-016																	
Activity: 9.43E-02 Error: 9.24E-01 MDC: 1.75E+00 *																	

Sec. Review: KS Analyst: JV LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 12:22:52.87
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 14-AUG-2006 10:46:42.39

LIMS No., Customer Name, Client ID: WG4311-1 WG EX/DRES

Sample ID : 07WG4311-1
Sample Type : WG
Quantity : 3.24570E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 10-AUG-2006 13:05:00.
Geometry : 073L082504
BKGFILE : 07BG072806MT
Real Time : 0 01:36:02.33
Live time : 0 01:36:01.10

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	140.51*	72	254	2.88	282.17	2.36E+00	1.25E-02	46.5	1.68E+00
2	4	241.84*	61	83	1.38	485.09	2.04E+00	1.06E-02	31.2	2.28E+00
3	1	295.06*	88	117	1.68	591.64	1.81E+00	1.53E-02	28.1	1.74E+00
4	1	351.98*	170	74	1.28	705.61	1.61E+00	2.96E-02	12.5	4.21E+00
5	1	609.23*	120	50	1.48	1220.61	1.09E+00	2.09E-02	15.6	1.55E+00
6	1	1121.80	81	41	0.82	2246.28	7.02E-01	1.41E-02	21.4	8.05E+01
7	1	1377.42*	19	5	1.99	2757.59	6.07E-01	3.36E-03	33.6	8.16E-01
8	1	1462.12	9	32	0.77	2926.97	5.82E-01	1.60E-03	151.1	3.82E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07WG4311-1

Acquisition date : 14-AUG-2006 10:46:42

Total number of lines in spectrum	8	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	1	12.50%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07WG4311-1

Acquisition date : 14-AUG-2006 10:46:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	140.51	72	254	2.88	282.17	277	12	1.25E-02	93.0	2.36E+00	
4	241.84	61	83	1.38	485.09	475	14	1.06E-02	62.4	2.04E+00	T
1	295.06	88	117	1.68	591.64	585	13	1.53E-02	56.3	1.81E+00	
1	351.98	170	74	1.28	705.61	701	9	2.96E-02	24.9	1.61E+00	
1	609.23	120	50	1.48	1220.61	1216	12	2.09E-02	31.2	1.09E+00	
1	1121.80	81	41	0.82	2246.28	2236	18	1.41E-02	42.7	7.02E-01	
1	1377.42	19	5	1.99	2757.59	2752	10	3.36E-03	67.1	6.07E-01	
1	1462.12	9	32	0.77	2926.97	2916	16	1.60E-03	****	5.82E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 8
Number of unidentified lines 7
Number of lines tentatively identified by NID 1 12.50%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.874E-02		2.057E+01	3.463E+01	0.000E+00	0.001
NA-24	-8.443E+01		1.989E+02	2.886E+02	0.000E+00	-0.293
K-40	-3.948E+00		4.223E+01	8.408E+01	0.000E+00	-0.047
CR-51	-1.861E+01		2.440E+01	3.732E+01	0.000E+00	-0.499
MN-54	-1.587E+00		2.957E+00	4.478E+00	0.000E+00	-0.354
CO-57	-1.592E-02		2.713E+00	4.317E+00	0.000E+00	-0.004
CO-58	1.274E+00		2.758E+00	4.744E+00	0.000E+00	0.269
FE-59	-1.775E-01		5.488E+00	9.090E+00	0.000E+00	-0.020
CO-60	-2.681E-01		2.435E+00	3.906E+00	0.000E+00	-0.069
ZN-65	3.584E+00		6.371E+00	1.014E+01	0.000E+00	0.354
SE-75	-1.283E+00		3.291E+00	5.264E+00	0.000E+00	-0.244
SR-85	-5.385E+00		3.654E+00	5.530E+00	0.000E+00	-0.974
Y-88	-2.555E-01		2.671E+00	4.341E+00	0.000E+00	-0.059
NB-94	-1.915E+00		2.824E+00	4.295E+00	0.000E+00	-0.446
NB-95	-1.195E+00		2.742E+00	4.229E+00	0.000E+00	-0.283
ZR-95	1.996E+00		4.497E+00	7.770E+00	0.000E+00	0.257
MO-99	-6.089E-02		5.146E+01	8.419E+01	0.000E+00	-0.001
RU-103	2.189E+00		2.771E+00	4.979E+00	0.000E+00	0.440
RU-106	-1.873E+00		2.251E+01	3.690E+01	0.000E+00	-0.051
AG-110m	1.981E+00		2.294E+00	4.186E+00	0.000E+00	0.473

SN-113	9.567E-03	3.522E+00	5.680E+00	0.000E+00	0.002
SB-124	3.736E-01	2.874E+00	4.569E+00	0.000E+00	0.082
SB-125	-5.878E+00	7.666E+00	1.129E+01	0.000E+00	-0.520
TE-129M	-1.380E+01	3.545E+01	5.439E+01	0.000E+00	-0.254
I-131	9.755E-01	3.584E+00	5.951E+00	0.000E+00	0.164
BA-133	8.008E-01	4.233E+00	6.138E+00	0.000E+00	0.130
CS-134	-2.019E+00	2.921E+00	3.745E+00	0.000E+00	-0.539
CS-136	2.487E+00	3.350E+00	5.932E+00	0.000E+00	0.419
CS-137	-3.610E+00	2.749E+00	3.757E+00	0.000E+00	-0.961
CE-139	-2.006E+00	2.461E+00	3.956E+00	0.000E+00	-0.507
BA-140	4.325E+00	1.110E+01	1.928E+01	0.000E+00	0.224
LA-140	-7.236E-01	3.538E+00	5.467E+00	0.000E+00	-0.132
CE-141	2.382E+00	5.253E+00	8.137E+00	0.000E+00	0.293
CE-144	4.205E+00	2.122E+01	3.406E+01	0.000E+00	0.123
EU-152	-6.851E+00	8.160E+00	1.227E+01	0.000E+00	-0.558
EU-154	-3.145E+00	5.562E+00	8.521E+00	0.000E+00	-0.369
RA-226	1.107E+01	6.582E+01	1.172E+02	0.000E+00	0.094
AC-228	-1.127E+00	1.111E+01	1.957E+01	0.000E+00	-0.058
TH-228	8.359E-01	5.294E+00	9.329E+00	0.000E+00	0.090
TH-232	-1.126E+00	1.109E+01	1.955E+01	0.000E+00	-0.058
U-235	9.904E+00	2.466E+01	3.608E+01	0.000E+00	0.274
U-238	7.973E+01	3.004E+02	5.201E+02	0.000E+00	0.153
AM-241	4.937E+00	2.287E+01	3.797E+01	0.000E+00	0.130

A,07WG4311-1 ,08/14/2006 12:22,08/10/2006 13:05, 3.246E+00,WG4311-1 WG EX
B,07WG4311-1 ,LIBD ,08/14/2006 09:44,073L082504

C,BE-7	,NO ,	1.874E-02,	2.057E+01,	3.463E+01,,	0.001
C,NA-24	,NO ,	-8.443E+01,	1.989E+02,	2.886E+02,,	-0.293
C,K-40	,NO ,	-3.948E+00,	4.223E+01,	8.408E+01,,	-0.047
C,CR-51	,NO ,	-1.861E+01,	2.440E+01,	3.732E+01,,	-0.499
C,MN-54	,NO ,	-1.587E+00,	2.957E+00,	4.478E+00,,	-0.354
C,CO-57	,NO ,	-1.592E-02,	2.713E+00,	4.317E+00,,	-0.004
C,CO-58	,NO ,	1.274E+00,	2.758E+00,	4.744E+00,,	0.269
C,FE-59	,NO ,	-1.775E-01,	5.488E+00,	9.090E+00,,	-0.020
C,CO-60	,NO ,	-2.681E-01,	2.435E+00,	3.906E+00,,	-0.069
C,ZN-65	,NO ,	3.584E+00,	6.371E+00,	1.014E+01,,	0.354
C,SE-75	,NO ,	-1.283E+00,	3.291E+00,	5.264E+00,,	-0.244
C,SR-85	,NO ,	-5.385E+00,	3.654E+00,	5.530E+00,,	-0.974
C,Y-88	,NO ,	-2.555E-01,	2.671E+00,	4.341E+00,,	-0.059
C,NB-94	,NO ,	-1.915E+00,	2.824E+00,	4.295E+00,,	-0.446
C,NB-95	,NO ,	-1.195E+00,	2.742E+00,	4.229E+00,,	-0.283
C,ZR-95	,NO ,	1.996E+00,	4.497E+00,	7.770E+00,,	0.257
C,MO-99	,NO ,	-6.089E-02,	5.146E+01,	8.419E+01,,	-0.001
C,RU-103	,NO ,	2.189E+00,	2.771E+00,	4.979E+00,,	0.440
C,RU-106	,NO ,	-1.873E+00,	2.251E+01,	3.690E+01,,	-0.051
C,AG-110m	,NO ,	1.981E+00,	2.294E+00,	4.186E+00,,	0.473
C,SN-113	,NO ,	9.567E-03,	3.522E+00,	5.680E+00,,	0.002
C,SB-124	,NO ,	3.736E-01,	2.874E+00,	4.569E+00,,	0.082
C,SB-125	,NO ,	-5.878E+00,	7.666E+00,	1.129E+01,,	-0.520
C,TE-129M	,NO ,	-1.380E+01,	3.545E+01,	5.439E+01,,	-0.254
C,I-131	,NO ,	9.755E-01,	3.584E+00,	5.951E+00,,	0.164
C,BA-133	,NO ,	8.008E-01,	4.233E+00,	6.138E+00,,	0.130
C,CS-134	,NO ,	-2.019E+00,	2.921E+00,	3.745E+00,,	-0.539
C,CS-136	,NO ,	2.487E+00,	3.350E+00,	5.932E+00,,	0.419
C,CS-137	,NO ,	-3.610E+00,	2.749E+00,	3.757E+00,,	-0.961
C,CE-139	,NO ,	-2.006E+00,	2.461E+00,	3.956E+00,,	-0.507
C,BA-140	,NO ,	4.325E+00,	1.110E+01,	1.928E+01,,	0.224
C,LA-140	,NO ,	-7.236E-01,	3.538E+00,	5.467E+00,,	-0.132
C,CE-141	,NO ,	2.382E+00,	5.253E+00,	8.137E+00,,	0.293
C,CE-144	,NO ,	4.205E+00,	2.122E+01,	3.406E+01,,	0.123
C,EU-152	,NO ,	-6.851E+00,	8.160E+00,	1.227E+01,,	-0.558
C,EU-154	,NO ,	-3.145E+00,	5.562E+00,	8.521E+00,,	-0.369
C,RA-226	,NO ,	1.107E+01,	6.582E+01,	1.172E+02,,	0.094
C,AC-228	,NO ,	-1.127E+00,	1.111E+01,	1.957E+01,,	-0.058
C,TH-228	,NO ,	8.359E-01,	5.294E+00,	9.329E+00,,	0.090
C,TH-232	,NO ,	-1.126E+00,	1.109E+01,	1.955E+01,,	-0.058
C,U-235	,NO ,	9.904E+00,	2.466E+01,	3.608E+01,,	0.274
C,U-238	,NO ,	7.973E+01,	3.004E+02,	5.201E+02,,	0.153
C,AM-241	,NO ,	4.937E+00,	2.287E+01,	3.797E+01,,	0.130

Sec. Review: KD Analyst: LIMS: N

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 17:05:20.63
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 11-AUG-2006 14:54:32.29

LIMS No., Customer Name, Client ID: L29557-1 WG EX/DRES

Sample ID : 11L29557-1
Sample Type : WG
Quantity : 3.24570E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 10-AUG-2006 13:05:00.
Geometry : 113L082304
BKGFILE : 11BG072806MT
Real Time : 0 02:10:46.61
Live time : 0 02:10:42.88

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.24	109	578	1.49	131.88	6.84E-01	1.40E-02	39.1	
2	0	74.68*	54	635	0.93	148.83	9.69E-01	6.88E-03	81.4	
3	0	77.12	170	577	0.98	153.72	1.05E+00	2.17E-02	24.7	
4	0	86.82	79	349	1.10	173.18	1.33E+00	1.01E-02	39.2	
5	0	241.13	304	428	1.36	482.72	1.57E+00	3.88E-02	15.9	
6	0	295.09*	510	229	1.51	590.91	1.37E+00	6.50E-02	7.6	
7	0	351.76*	901	161	1.36	704.54	1.20E+00	1.15E-01	4.4	
8	0	609.04*	838	75	1.62	1220.01	7.90E-01	1.07E-01	4.1	
9	0	665.38	25	46	1.12	1332.80	7.37E-01	3.12E-03	51.3	
10	0	768.48	54	44	1.42	1539.19	6.58E-01	6.93E-03	25.1	
11	0	935.78	37	77	1.03	1873.90	5.62E-01	4.76E-03	59.8	
12	0	1120.27*	155	36	1.69	2242.77	4.86E-01	1.98E-02	11.5	
13	0	1238.76*	65	54	1.74	2479.54	4.48E-01	8.35E-03	30.5	
14	0	1378.81*	37	47	1.99	2759.25	4.10E-01	4.68E-03	49.9	
15	0	1407.98	26	27	0.89	2817.48	4.04E-01	3.31E-03	43.1	
16	0	1460.61*	11	21	2.08	2922.55	3.92E-01	1.44E-03	112.2	
17	0	1509.84	30	15	1.15	3020.80	3.82E-01	3.79E-03	34.7	
18	0	1728.30	24	16	1.56	3456.60	3.44E-01	3.03E-03	42.4	
19	0	1762.61*	130	15	1.47	3525.01	3.39E-01	1.65E-02	11.3	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	11	10.67*	3.919E-01	2.866E+01	2.866E+01	224.35

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L29557-1 Acquisition date : 11-AUG-2006 14:54:32

Total number of lines in spectrum	19	
Number of unidentified lines	16	
Number of lines tentatively identified by NID	3	15.79%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.866E+01	2.866E+01	6.430E+01	224.35	
	Total Activity :		2.866E+01	2.866E+01			
	Grand Total Activity :		2.866E+01	2.866E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L29557-1

Acquisition date : 11-AUG-2006 14:54:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.24	109	578	1.49	131.88	129	8	1.40E-02	78.3	6.84E-01	
0	74.68	54	635	0.93	148.83	145	7	6.88E-03	****	9.69E-01	
0	77.12	170	577	0.98	153.72	152	7	2.17E-02	49.3	1.05E+00	
0	86.82	79	349	1.10	173.18	171	6	1.01E-02	78.3	1.33E+00	
0	241.13	304	428	1.36	482.72	475	15	3.88E-02	31.8	1.57E+00	T
0	295.09	510	229	1.51	590.91	585	13	6.50E-02	15.2	1.37E+00	
0	351.76	901	161	1.36	704.54	698	12	1.15E-01	8.8	1.20E+00	
0	609.04	838	75	1.62	1220.01	1212	14	1.07E-01	8.3	7.90E-01	
0	665.38	25	46	1.12	1332.80	1329	8	3.12E-03	****	7.37E-01	
0	768.48	54	44	1.42	1539.19	1535	8	6.93E-03	50.2	6.58E-01	
0	935.78	37	77	1.03	1873.90	1864	19	4.76E-03	****	5.62E-01	
0	1120.27	155	36	1.69	2242.77	2236	13	1.98E-02	23.0	4.86E-01	
0	1238.76	65	54	1.74	2479.54	2470	20	8.35E-03	61.1	4.48E-01	
0	1378.81	37	47	1.99	2759.25	2748	21	4.68E-03	99.8	4.10E-01	
0	1407.98	26	27	0.89	2817.48	2810	12	3.31E-03	86.2	4.04E-01	T
0	1509.84	30	15	1.15	3020.80	3013	14	3.79E-03	69.4	3.82E-01	
0	1728.30	24	16	1.56	3456.60	3449	14	3.03E-03	84.8	3.44E-01	
0	1762.61	130	15	1.47	3525.01	3518	15	1.65E-02	22.7	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	19	
Number of unidentified lines	16	
Number of lines tentatively identified by NID	3	15.79%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.866E+01	2.866E+01	6.430E+01	224.35	
	Total Activity :		2.866E+01	2.866E+01			

Grand Total Activity : 2.866E+01 2.866E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.551E+01		3.016E+01	5.227E+01	0.000E+00	0.297
NA-24	-3.691E+00		1.444E+01	2.030E+01	0.000E+00	-0.182
CR-51	9.105E+00		3.059E+01	5.033E+01	0.000E+00	0.181
MN-54	-1.522E+00		3.456E+00	5.356E+00	0.000E+00	-0.284
CO-57	-1.296E+00		3.517E+00	5.823E+00	0.000E+00	-0.222
CO-58	-1.390E-01		3.470E+00	5.629E+00	0.000E+00	-0.025
FE-59	2.141E+00		6.742E+00	1.166E+01	0.000E+00	0.184
CO-60	-4.992E-02		3.567E+00	5.884E+00	0.000E+00	-0.008
ZN-65	-1.380E+00		8.289E+00	1.161E+01	0.000E+00	-0.119
SE-75	4.744E+00		4.798E+00	8.218E+00	0.000E+00	0.577
SR-85	-6.834E+00		4.024E+00	6.051E+00	0.000E+00	-1.129
Y-88	-2.779E-01		3.322E+00	5.271E+00	0.000E+00	-0.053
NB-94	-2.088E-01		3.390E+00	5.539E+00	0.000E+00	-0.038
NB-95	6.191E+00		4.100E+00	6.881E+00	0.000E+00	0.900
ZR-95	9.236E-01		5.835E+00	9.697E+00	0.000E+00	0.095
MO-99	-8.300E-01		3.401E+01	5.557E+01	0.000E+00	-0.015
RU-103	-2.354E+00		3.328E+00	5.271E+00	0.000E+00	-0.447
RU-106	6.092E+00		3.158E+01	5.309E+01	0.000E+00	0.115
AG-110m	1.351E+00		3.246E+00	5.554E+00	0.000E+00	0.243
SN-113	-1.082E+00		4.650E+00	7.321E+00	0.000E+00	-0.148
SB-124	4.250E+00		3.775E+00	6.106E+00	0.000E+00	0.696
SB-125	-2.539E+00		1.043E+01	1.731E+01	0.000E+00	-0.147
TE-129M	2.472E+01		4.113E+01	7.170E+01	0.000E+00	0.345
I-131	-2.345E-01		3.924E+00	6.279E+00	0.000E+00	-0.037
BA-133	-2.161E+00		5.311E+00	7.154E+00	0.000E+00	-0.302
CS-134	-2.336E+00		4.180E+00	5.641E+00	0.000E+00	-0.414
CS-136	1.082E+00		3.479E+00	5.850E+00	0.000E+00	0.185
CS-137	1.728E+00		3.815E+00	5.798E+00	0.000E+00	0.298
CE-139	-1.320E+00		3.696E+00	6.057E+00	0.000E+00	-0.218
BA-140	4.496E+00		1.247E+01	2.137E+01	0.000E+00	0.210
LA-140	1.008E+00		4.530E+00	7.632E+00	0.000E+00	0.132
CE-141	3.422E+00		6.411E+00	1.089E+01	0.000E+00	0.314
CE-144	-5.312E+00		2.784E+01	4.627E+01	0.000E+00	-0.115
EU-152	-2.807E+00		1.257E+01	1.926E+01	0.000E+00	-0.146
EU-154	1.897E+00		7.440E+00	1.259E+01	0.000E+00	0.151
RA-226	-1.345E+02		9.357E+01	1.479E+02	0.000E+00	-0.909
AC-228	2.480E-02		1.368E+01	2.378E+01	0.000E+00	0.001
TH-228	4.212E+00		7.831E+00	1.214E+01	0.000E+00	0.347
TH-232	2.479E-02		1.367E+01	2.377E+01	0.000E+00	0.001
U-235	-5.107E+00		2.965E+01	4.920E+01	0.000E+00	-0.104
U-238	1.923E+01		4.461E+02	7.204E+02	0.000E+00	0.027
AM-241	-2.608E+01		4.056E+01	6.309E+01	0.000E+00	-0.413

A,11L29557-1 ,08/11/2006 17:05,08/10/2006 13:05, 3.246E+00,L29557-1 WG EX
B,11L29557-1 ,LIBD ,08/11/2006 09:47,113L082304

C,K-40	,YES,	2.866E+01,	6.430E+01,	5.796E+01,,	0.494
C,BE-7	,NO ,	1.551E+01,	3.016E+01,	5.227E+01,,	0.297
C,NA-24	,NO ,	-3.691E+00,	1.444E+01,	2.030E+01,,	-0.182
C,CR-51	,NO ,	9.105E+00,	3.059E+01,	5.033E+01,,	0.181
C,MN-54	,NO ,	-1.522E+00,	3.456E+00,	5.356E+00,,	-0.284
C,CO-57	,NO ,	-1.296E+00,	3.517E+00,	5.823E+00,,	-0.222
C,CO-58	,NO ,	-1.390E-01,	3.470E+00,	5.629E+00,,	-0.025
C,FE-59	,NO ,	2.141E+00,	6.742E+00,	1.166E+01,,	0.184
C,CO-60	,NO ,	-4.992E-02,	3.567E+00,	5.884E+00,,	-0.008
C,ZN-65	,NO ,	-1.380E+00,	8.289E+00,	1.161E+01,,	-0.119
C,SE-75	,NO ,	4.744E+00,	4.798E+00,	8.218E+00,,	0.577
C,SR-85	,NO ,	-6.834E+00,	4.024E+00,	6.051E+00,,	-1.129
C,Y-88	,NO ,	-2.779E-01,	3.322E+00,	5.271E+00,,	-0.053
C,NB-94	,NO ,	-2.088E-01,	3.390E+00,	5.539E+00,,	-0.038
C,NB-95	,NO ,	6.191E+00,	4.100E+00,	6.881E+00,,	0.900
C,ZR-95	,NO ,	9.236E-01,	5.835E+00,	9.697E+00,,	0.095
C,MO-99	,NO ,	-8.300E-01,	3.401E+01,	5.557E+01,,	-0.015
C,RU-103	,NO ,	-2.354E+00,	3.328E+00,	5.271E+00,,	-0.447
C,RU-106	,NO ,	6.092E+00,	3.158E+01,	5.309E+01,,	0.115
C,AG-110m	,NO ,	1.351E+00,	3.246E+00,	5.554E+00,,	0.243
C,SN-113	,NO ,	-1.082E+00,	4.650E+00,	7.321E+00,,	-0.148
C,SB-124	,NO ,	4.250E+00,	3.775E+00,	6.106E+00,,	0.696
C,SB-125	,NO ,	-2.539E+00,	1.043E+01,	1.731E+01,,	-0.147
C,TE-129M	,NO ,	2.472E+01,	4.113E+01,	7.170E+01,,	0.345
C,I-131	,NO ,	-2.345E-01,	3.924E+00,	6.279E+00,,	-0.037
C,BA-133	,NO ,	-2.161E+00,	5.311E+00,	7.154E+00,,	-0.302
C,CS-134	,NO ,	-2.336E+00,	4.180E+00,	5.641E+00,,	-0.414
C,CS-136	,NO ,	1.082E+00,	3.479E+00,	5.850E+00,,	0.185
C,CS-137	,NO ,	1.728E+00,	3.815E+00,	5.798E+00,,	0.298
C,CE-139	,NO ,	-1.320E+00,	3.696E+00,	6.057E+00,,	-0.218
C,BA-140	,NO ,	4.496E+00,	1.247E+01,	2.137E+01,,	0.210
C,LA-140	,NO ,	1.008E+00,	4.530E+00,	7.632E+00,,	0.132
C,CE-141	,NO ,	3.422E+00,	6.411E+00,	1.089E+01,,	0.314
C,CE-144	,NO ,	-5.312E+00,	2.784E+01,	4.627E+01,,	-0.115
C,EU-152	,NO ,	-2.807E+00,	1.257E+01,	1.926E+01,,	-0.146
C,EU-154	,NO ,	1.897E+00,	7.440E+00,	1.259E+01,,	0.151
C,RA-226	,NO ,	-1.345E+02,	9.357E+01,	1.479E+02,,	-0.909
C,AC-228	,NO ,	2.480E-02,	1.368E+01,	2.378E+01,,	0.001
C,TH-228	,NO ,	4.212E+00,	7.831E+00,	1.214E+01,,	0.347
C,TH-232	,NO ,	2.479E-02,	1.367E+01,	2.377E+01,,	0.001
C,U-235	,NO ,	-5.107E+00,	2.965E+01,	4.920E+01,,	-0.104
C,U-238	,NO ,	1.923E+01,	4.461E+02,	7.204E+02,,	0.027
C,AM-241	,NO ,	-2.608E+01,	4.056E+01,	6.309E+01,,	-0.413

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 15:55:46.92
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 11-AUG-2006 14:54:33.72

LIMS No., Customer Name, Client ID: L29557-2 WG EX/DRES

Sample ID : 04L29557-2
Sample Type : WG
Quantity : 3.06250E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 10-AUG-2006 12:10:00.
Geometry : 043L082004
BKGFILE : 04BG072806MT
Real Time : 0 01:01:01.88
Live time : 0 01:01:01.22

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	198.60*	44	77	1.33	398.40	1.86E+00	1.21E-02	42.2	2.89E+00
2	1	294.80*	19	52	1.20	590.93	1.46E+00	5.31E-03	72.9	9.75E-01
3	1	351.46*	54	74	2.37	704.31	1.28E+00	1.47E-02	36.3	3.31E+00
4	1	583.09*	9	36	3.95	1167.71	8.77E-01	2.40E-03	147.6	3.17E+00
5	1	608.99*	38	27	1.97	1219.52	8.49E-01	1.04E-02	35.4	6.44E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L29557-2 Acquisition date : 11-AUG-2006 14:54:33

Total number of lines in spectrum	5	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	1	20.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L29557-2 Acquisition date : 11-AUG-2006 14:54:33

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	198.60	44	77	1.33	398.40	393	11	1.21E-02	84.4	1.86E+00	
1	294.80	19	52	1.20	590.93	587	9	5.31E-03	****	1.46E+00	
1	351.46	54	74	2.37	704.31	700	15	1.47E-02	72.6	1.28E+00	
1	583.09	9	36	3.95	1167.71	1160	14	2.40E-03	****	8.77E-01	T
1	608.99	38	27	1.97	1219.52	1215	15	1.04E-02	70.7	8.49E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 5
Number of unidentified lines 4
Number of lines tentatively identified by NID 1 20.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.952E+01		2.729E+01	3.815E+01	0.000E+00	-0.512
NA-24	-3.348E+00		1.280E+01	1.957E+01	0.000E+00	-0.171
K-40	3.765E+01		6.106E+01	1.312E+02	0.000E+00	0.287
CR-51	8.515E+00		3.118E+01	5.340E+01	0.000E+00	0.159
MN-54	-1.201E+00		3.872E+00	5.995E+00	0.000E+00	-0.200
CO-57	-8.827E-01		3.171E+00	5.028E+00	0.000E+00	-0.176
CO-58	2.700E-02		3.906E+00	6.454E+00	0.000E+00	0.004
FE-59	1.123E+00		7.551E+00	1.258E+01	0.000E+00	0.089
CO-60	6.386E-01		4.357E+00	8.436E+00	0.000E+00	0.076
ZN-65	-5.426E+00		8.728E+00	1.193E+01	0.000E+00	-0.455
SE-75	-7.244E-01		4.758E+00	7.874E+00	0.000E+00	-0.092
SR-85	-1.162E+01		5.329E+00	6.367E+00	0.000E+00	-1.826
Y-88	2.607E+00		2.632E+00	6.119E+00	0.000E+00	0.426
NB-94	-1.326E+00		3.294E+00	5.075E+00	0.000E+00	-0.261
NB-95	-1.475E+00		3.643E+00	5.572E+00	0.000E+00	-0.265
ZR-95	-5.214E+00		6.666E+00	9.393E+00	0.000E+00	-0.555
MO-99	1.437E+01		3.785E+01	6.690E+01	0.000E+00	0.215
RU-103	-9.562E-01		3.473E+00	5.339E+00	0.000E+00	-0.179
RU-106	4.187E+01		4.058E+01	7.701E+01	0.000E+00	0.544
AG-110m	5.763E-01		3.911E+00	6.696E+00	0.000E+00	0.086
SN-113	3.505E+00		4.876E+00	8.722E+00	0.000E+00	0.402
SB-124	-1.505E+00		4.229E+00	6.353E+00	0.000E+00	-0.237
SB-125	-1.074E-01		1.154E+01	1.881E+01	0.000E+00	-0.006

TE-129M	-1.116E+01	4.759E+01	7.484E+01	0.000E+00	-0.149
I-131	-3.319E+00	4.622E+00	6.982E+00	0.000E+00	-0.475
BA-133	2.579E+00	5.689E+00	8.879E+00	0.000E+00	0.290
CS-134	1.265E+00	4.238E+00	6.594E+00	0.000E+00	0.192
CS-136	3.761E+00	3.538E+00	7.027E+00	0.000E+00	0.535
CS-137	-7.550E-03	4.251E+00	7.116E+00	0.000E+00	-0.001
CE-139	5.883E-01	3.635E+00	5.916E+00	0.000E+00	0.099
BA-140	4.394E+00	1.401E+01	2.369E+01	0.000E+00	0.186
LA-140	-4.834E+00	5.886E+00	7.588E+00	0.000E+00	-0.637
CE-141	-3.952E+00	6.146E+00	9.351E+00	0.000E+00	-0.423
CE-144	-1.532E+00	2.648E+01	4.272E+01	0.000E+00	-0.036
EU-152	-4.877E+00	1.085E+01	1.691E+01	0.000E+00	-0.288
EU-154	-4.006E+00	6.941E+00	1.070E+01	0.000E+00	-0.375
RA-226	-5.626E+01	1.032E+02	1.639E+02	0.000E+00	-0.343
AC-228	4.050E+00	1.575E+01	2.929E+01	0.000E+00	0.138
TH-228	-5.004E+00	7.601E+00	1.308E+01	0.000E+00	-0.382
TH-232	4.049E+00	1.574E+01	2.928E+01	0.000E+00	0.138
U-235	1.336E+00	2.732E+01	4.434E+01	0.000E+00	0.030
U-238	-1.997E+02	3.994E+02	5.656E+02	0.000E+00	-0.353
AM-241	1.991E+01	3.323E+01	5.858E+01	0.000E+00	0.340

A,04L29557-2 ,08/11/2006 15:55,08/10/2006 12:10, 3.063E+00,L29557-2 WG EX
B,04L29557-2 ,LIBD ,08/11/2006 09:46,043L082004

C,BE-7	,NO ,	-1.952E+01,	2.729E+01,	3.815E+01,,	-0.512
C,NA-24	,NO ,	-3.348E+00,	1.280E+01,	1.957E+01,,	-0.171
C,K-40	,NO ,	3.765E+01,	6.106E+01,	1.312E+02,,	0.287
C,CR-51	,NO ,	8.515E+00,	3.118E+01,	5.340E+01,,	0.159
C,MN-54	,NO ,	-1.201E+00,	3.872E+00,	5.995E+00,,	-0.200
C,CO-57	,NO ,	-8.827E-01,	3.171E+00,	5.028E+00,,	-0.176
C,CO-58	,NO ,	2.700E-02,	3.906E+00,	6.454E+00,,	0.004
C,FE-59	,NO ,	1.123E+00,	7.551E+00,	1.258E+01,,	0.089
C,CO-60	,NO ,	6.386E-01,	4.357E+00,	8.436E+00,,	0.076
C,ZN-65	,NO ,	-5.426E+00,	8.728E+00,	1.193E+01,,	-0.455
C,SE-75	,NO ,	-7.244E-01,	4.758E+00,	7.874E+00,,	-0.092
C,SR-85	,NO ,	-1.162E+01,	5.329E+00,	6.367E+00,,	-1.826
C,Y-88	,NO ,	2.607E+00,	2.632E+00,	6.119E+00,,	0.426
C,NB-94	,NO ,	-1.326E+00,	3.294E+00,	5.075E+00,,	-0.261
C,NB-95	,NO ,	-1.475E+00,	3.643E+00,	5.572E+00,,	-0.265
C,ZR-95	,NO ,	-5.214E+00,	6.666E+00,	9.393E+00,,	-0.555
C,MO-99	,NO ,	1.437E+01,	3.785E+01,	6.690E+01,,	0.215
C,RU-103	,NO ,	-9.562E-01,	3.473E+00,	5.339E+00,,	-0.179
C,RU-106	,NO ,	4.187E+01,	4.058E+01,	7.701E+01,,	0.544
C,AG-110m	,NO ,	5.763E-01,	3.911E+00,	6.696E+00,,	0.086
C,SN-113	,NO ,	3.505E+00,	4.876E+00,	8.722E+00,,	0.402
C,SB-124	,NO ,	-1.505E+00,	4.229E+00,	6.353E+00,,	-0.237
C,SB-125	,NO ,	-1.074E-01,	1.154E+01,	1.881E+01,,	-0.006
C,TE-129M	,NO ,	-1.116E+01,	4.759E+01,	7.484E+01,,	-0.149
C,I-131	,NO ,	-3.319E+00,	4.622E+00,	6.982E+00,,	-0.475
C,BA-133	,NO ,	2.579E+00,	5.689E+00,	8.879E+00,,	0.290
C,CS-134	,NO ,	1.265E+00,	4.238E+00,	6.594E+00,,	0.192
C,CS-136	,NO ,	3.761E+00,	3.538E+00,	7.027E+00,,	0.535
C,CS-137	,NO ,	-7.550E-03,	4.251E+00,	7.116E+00,,	-0.001
C,CE-139	,NO ,	5.883E-01,	3.635E+00,	5.916E+00,,	0.099
C,BA-140	,NO ,	4.394E+00,	1.401E+01,	2.369E+01,,	0.186
C,LA-140	,NO ,	-4.834E+00,	5.886E+00,	7.588E+00,,	-0.637
C,CE-141	,NO ,	-3.952E+00,	6.146E+00,	9.351E+00,,	-0.423
C,CE-144	,NO ,	-1.532E+00,	2.648E+01,	4.272E+01,,	-0.036
C,EU-152	,NO ,	-4.877E+00,	1.085E+01,	1.691E+01,,	-0.288
C,EU-154	,NO ,	-4.006E+00,	6.941E+00,	1.070E+01,,	-0.375
C,RA-226	,NO ,	-5.626E+01,	1.032E+02,	1.639E+02,,	-0.343
C,AC-228	,NO ,	4.050E+00,	1.575E+01,	2.929E+01,,	0.138
C,TH-228	,NO ,	-5.004E+00,	7.601E+00,	1.308E+01,,	-0.382
C,TH-232	,NO ,	4.049E+00,	1.574E+01,	2.928E+01,,	0.138
C,U-235	,NO ,	1.336E+00,	2.732E+01,	4.434E+01,,	0.030
C,U-238	,NO ,	-1.997E+02,	3.994E+02,	5.656E+02,,	-0.353
C,AM-241	,NO ,	1.991E+01,	3.323E+01,	5.858E+01,,	0.340

Sec. Review: Analyst: LIMS: ___

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 13:12:51.33
TBE23 03017322 HpGe ********** Aquisition Date/Time: 11-AUG-2006 14:51:59.00

LIMS No., Customer Name, Client ID: L29557-3 WG EX/DRES

Sample ID : 23L29557-3
Sample Type : WG
Quantity : 1.00250E+00 L
Start Channel : 50 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 10-AUG-2006 14:20:00.
Geometry : 231L082404
BKGFILE : 23BG072806MT
Real Time : 1 00:21:30.88
Live time : 1 00:20:34.34

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	9	35.37*	190	900	2.52	71.23	1.93E-01	2.17E-03	58.2	1.54E+01
2	9	40.54	330	1701	1.97	81.55	3.80E-01	3.76E-03	21.4	
3	1	63.29*	84	1880	1.22	127.00	1.68E+00	9.56E-04	113.5	2.14E+00
4	1	66.19	309	1849	1.22	132.78	1.85E+00	3.52E-03	23.9	
5	0	77.00*	88	1646	1.37	154.39	2.43E+00	9.99E-04	85.4	
6	0	139.80*	281	2665	1.14	279.84	3.59E+00	3.20E-03	37.3	
7	0	198.03	398	2068	1.80	396.19	3.23E+00	4.54E-03	21.2	
8	0	238.38*	75	1730	1.19	476.81	2.89E+00	8.57E-04	121.9	
9	0	241.57	190	1306	1.13	483.18	2.87E+00	2.17E-03	32.4	
10	0	295.12*	290	1474	1.01	590.20	2.47E+00	3.31E-03	30.0	
11	0	351.77*	133	1065	1.26	703.43	2.14E+00	1.52E-03	57.0	
12	0	569.98*	63	700	1.21	1139.67	1.43E+00	7.24E-04	102.0	
13	0	583.01*	63	533	1.85	1165.72	1.40E+00	7.15E-04	90.5	
14	0	595.88	158	571	0.98	1191.45	1.38E+00	1.80E-03	29.4	
15	0	609.08*	114	581	1.25	1217.84	1.35E+00	1.30E-03	55.5	
16	0	726.98*	30	263	0.86	1453.64	1.18E+00	3.41E-04	120.8	
17	0	910.97*	35	300	1.45	1821.72	9.93E-01	4.05E-04	121.9	
18	0	969.34*	66	246	1.68	1938.52	9.48E-01	7.52E-04	66.1	
19	0	1120.36*	93	286	1.33	2240.78	8.54E-01	1.06E-03	51.0	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
AC-228	835.50	------	1.75	1.059E+00	------	Line Not Found	------
	911.07	35	27.70*	9.926E-01	3.971E+00	3.973E+00	243.90
TH-228	238.63	75	44.60*	2.891E+00	1.791E+00	1.794E+00	243.81
	240.98	190	3.95	2.865E+00	5.167E+01	5.175E+01	64.74
TH-232	583.14	63	30.25	1.403E+00	4.541E+00	4.541E+00	180.94
	911.07	35	27.70*	9.926E-01	3.971E+00	3.971E+00	243.90
	969.11	66	16.60	9.482E-01	1.287E+01	1.287E+01	132.20

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L29557-3 Acquisition date : 11-AUG-2006 14:51:59

Total number of lines in spectrum	19	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	5	26.32%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AC-228	5.75Y	1.00	3.971E+00	3.973E+00	9.691E+00	243.90	
TH-228	1.91Y	1.00	1.791E+00	1.794E+00	4.374E+00	243.81	
TH-232	1.41E+10Y	1.00	3.971E+00	3.971E+00	9.686E+00	243.90	
	Total Activity :		9.734E+00	9.739E+00			

Grand Total Activity : 9.734E+00 9.739E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L29557-3

Acquisition date : 11-AUG-2006 14:51:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
9	35.37	190	900	2.52	71.23	64	23	2.17E-03	****	1.93E-01	
9	40.54	330	1701	1.97	81.55	64	23	3.76E-03	42.9	3.80E-01	
1	63.29	84	1880	1.22	127.00	122	15	9.56E-04	****	1.68E+00	
1	66.19	309	1849	1.22	132.78	122	15	3.52E-03	47.8	1.85E+00	
0	77.00	88	1646	1.37	154.39	152	6	9.99E-04	****	2.43E+00	
0	139.80	281	2665	1.14	279.84	276	9	3.20E-03	74.6	3.59E+00	
0	198.03	398	2068	1.80	396.19	392	9	4.54E-03	42.4	3.23E+00	
0	295.12	290	1474	1.01	590.20	585	11	3.31E-03	60.0	2.47E+00	
0	351.77	133	1065	1.26	703.43	699	9	1.52E-03	****	2.14E+00	
0	569.98	63	700	1.21	1139.67	1133	13	7.24E-04	****	1.43E+00	
0	595.88	158	571	0.98	1191.45	1187	10	1.80E-03	58.7	1.38E+00	
0	609.08	114	581	1.25	1217.84	1213	10	1.30E-03	****	1.35E+00	
0	726.98	30	263	0.86	1453.64	1451	8	3.41E-04	****	1.18E+00	
0	1120.36	93	286	1.33	2240.78	2233	16	1.06E-03	****	8.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	19	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	5	26.32%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	2.627E+00	2.631E+00	4.338E+00	164.84	
TH-232	1.41E+10Y	1.00	5.326E+00	5.326E+00	5.880E+00	110.41	
	Total Activity :		7.953E+00	7.957E+00			

Grand Total Activity : 7.953E+00 7.957E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	2.631E+00	4.338E+00	4.259E+00	0.000E+00	0.618

TH-232	5.326E+00	5.880E+00	8.676E+00	0.000E+00	0.614

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	4.918E+00		1.235E+01	2.088E+01	0.000E+00	0.236
NA-24	-3.268E+00		7.029E+00	1.179E+01	0.000E+00	-0.277
K-40	-3.756E+01		3.558E+01	5.953E+01	0.000E+00	-0.631
CR-51	1.384E+01		1.216E+01	2.100E+01	0.000E+00	0.659
MN-54	-9.918E-02		1.423E+00	2.467E+00	0.000E+00	-0.040
CO-57	9.517E-01		1.378E+00	2.231E+00	0.000E+00	0.427
CO-58	-6.698E-01		1.344E+00	2.299E+00	0.000E+00	-0.291
FE-59	-3.221E-01		2.734E+00	4.691E+00	0.000E+00	-0.069
CO-60	4.499E-01		1.501E+00	2.619E+00	0.000E+00	0.172
ZN-65	9.623E-01		3.266E+00	4.994E+00	0.000E+00	0.193
SE-75	1.071E+00		1.927E+00	3.293E+00	0.000E+00	0.325
SR-85	-1.658E+01		2.082E+00	2.839E+00	0.000E+00	-5.841
Y-88	-5.208E-01		1.465E+00	2.442E+00	0.000E+00	-0.213
NB-94	-2.617E-01		1.471E+00	2.411E+00	0.000E+00	-0.109
NB-95	8.749E-01		1.446E+00	2.444E+00	0.000E+00	0.358
ZR-95	-9.082E-01		2.546E+00	4.139E+00	0.000E+00	-0.219
MO-99	-1.436E-02		1.624E+01	2.680E+01	0.000E+00	-0.001
RU-103	-3.046E-02		1.544E+00	2.572E+00	0.000E+00	-0.012
RU-106	-1.546E+00		1.389E+01	2.295E+01	0.000E+00	-0.067
AG-110m	-6.780E-02		1.472E+00	2.433E+00	0.000E+00	-0.028
SN-113	-1.968E-01		1.928E+00	3.226E+00	0.000E+00	-0.061
SB-124	-9.083E-01		1.632E+00	2.557E+00	0.000E+00	-0.355
SB-125	-2.526E+00		4.161E+00	6.852E+00	0.000E+00	-0.369
TE-129M	-1.003E+01		1.714E+01	2.817E+01	0.000E+00	-0.356
I-131	9.320E-01		1.678E+00	2.858E+00	0.000E+00	0.326
BA-133	1.874E+00		2.266E+00	3.433E+00	0.000E+00	0.546
CS-134	-3.836E-03		1.763E+00	2.549E+00	0.000E+00	-0.002
CS-136	-2.323E-01		1.480E+00	2.562E+00	0.000E+00	-0.091
CS-137	-1.213E+00		1.634E+00	2.630E+00	0.000E+00	-0.461
CE-139	-7.152E-01		1.361E+00	2.308E+00	0.000E+00	-0.310
BA-140	1.240E+00		5.626E+00	9.438E+00	0.000E+00	0.131
LA-140	-1.726E+00		1.762E+00	2.830E+00	0.000E+00	-0.610
CE-141	5.455E-01		2.393E+00	3.982E+00	0.000E+00	0.137
CE-144	-1.872E+00		1.006E+01	1.723E+01	0.000E+00	-0.109
EU-152	-1.233E+00		4.450E+00	7.441E+00	0.000E+00	-0.166
EU-154	-9.004E-01		2.938E+00	4.675E+00	0.000E+00	-0.193
RA-226	-2.863E+01		5.364E+01	6.906E+01	0.000E+00	-0.415
AC-228	3.973E+00		9.691E+00	1.067E+01	0.000E+00	0.372
U-235	-1.312E+00		1.470E+01	1.812E+01	0.000E+00	-0.072
U-238	1.205E+01		2.240E+02	3.116E+02	0.000E+00	0.039
AM-241	7.290E+00		7.886E+00	1.168E+01	0.000E+00	0.624

```
A,23L29557-3       ,08/14/2006 13:12,08/10/2006 14:20,   1.003E+00,L29557-3 WG EX
B,23L29557-3       ,LIBD                ,08/11/2006 09:57,231L082404
C,TH-228   ,YES,    2.631E+00,    4.338E+00,    4.259E+00,,     0.618
C,TH-232   ,YES,    5.326E+00,    5.880E+00,    8.676E+00,,     0.614
C,BE-7     ,NO ,    4.918E+00,    1.235E+01,    2.088E+01,,     0.236
C,NA-24    ,NO ,   -3.268E+00,    7.029E+00,    1.179E+01,,    -0.277
C,K-40     ,NO ,   -3.756E+01,    3.558E+01,    5.953E+01,,    -0.631
C,CR-51    ,NO ,    1.384E+01,    1.216E+01,    2.100E+01,,     0.659
C,MN-54    ,NO ,   -9.918E-02,    1.423E+00,    2.467E+00,,    -0.040
C,CO-57    ,NO ,    9.517E-01,    1.378E+00,    2.231E+00,,     0.427
C,CO-58    ,NO ,   -6.698E-01,    1.344E+00,    2.299E+00,,    -0.291
C,FE-59    ,NO ,   -3.221E-01,    2.734E+00,    4.691E+00,,    -0.069
C,CO-60    ,NO ,    4.499E-01,    1.501E+00,    2.619E+00,,     0.172
C,ZN-65    ,NO ,    9.623E-01,    3.266E+00,    4.994E+00,,     0.193
C,SE-75    ,NO ,    1.071E+00,    1.927E+00,    3.293E+00,,     0.325
C,SR-85    ,NO ,   -1.658E+01,    2.082E+00,    2.839E+00,,    -5.841
C,Y-88     ,NO ,   -5.208E-01,    1.465E+00,    2.442E+00,,    -0.213
C,NB-94    ,NO ,   -2.617E-01,    1.471E+00,    2.411E+00,,    -0.109
C,NB-95    ,NO ,    8.749E-01,    1.446E+00,    2.444E+00,,     0.358
C,ZR-95    ,NO ,   -9.082E-01,    2.546E+00,    4.139E+00,,    -0.219
C,MO-99    ,NO ,   -1.436E-02,    1.624E+01,    2.680E+01,,    -0.001
C,RU-103   ,NO ,   -3.046E-02,    1.544E+00,    2.572E+00,,    -0.012
C,RU-106   ,NO ,   -1.546E+00,    1.389E+01,    2.295E+01,,    -0.067
C,AG-110m  ,NO ,   -6.780E-02,    1.472E+00,    2.433E+00,,    -0.028
C,SN-113   ,NO ,   -1.968E-01,    1.928E+00,    3.226E+00,,    -0.061
C,SB-124   ,NO ,   -9.083E-01,    1.632E+00,    2.557E+00,,    -0.355
C,SB-125   ,NO ,   -2.526E+00,    4.161E+00,    6.852E+00,,    -0.369
C,TE-129M  ,NO ,   -1.003E+01,    1.714E+01,    2.817E+01,,    -0.356
C,I-131    ,NO ,    9.320E-01,    1.678E+00,    2.858E+00,,     0.326
C,BA-133   ,NO ,    1.874E+00,    2.266E+00,    3.433E+00,,     0.546
C,CS-134   ,NO ,   -3.836E-03,    1.763E+00,    2.549E+00,,    -0.002
C,CS-136   ,NO ,   -2.323E-01,    1.480E+00,    2.562E+00,,    -0.091
C,CS-137   ,NO ,   -1.213E+00,    1.634E+00,    2.630E+00,,    -0.461
C,CE-139   ,NO ,   -7.152E-01,    1.361E+00,    2.308E+00,,    -0.310
C,BA-140   ,NO ,    1.240E+00,    5.626E+00,    9.438E+00,,     0.131
C,LA-140   ,NO ,   -1.726E+00,    1.762E+00,    2.830E+00,,    -0.610
C,CE-141   ,NO ,    5.455E-01,    2.393E+00,    3.982E+00,,     0.137
C,CE-144   ,NO ,   -1.872E+00,    1.006E+01,    1.723E+01,,    -0.109
C,EU-152   ,NO ,   -1.233E+00,    4.450E+00,    7.441E+00,,    -0.166
C,EU-154   ,NO ,   -9.004E-01,    2.938E+00,    4.675E+00,,    -0.193
C,RA-226   ,NO ,   -2.863E+01,    5.364E+01,    6.906E+01,,    -0.415
C,AC-228   ,NO ,    3.973E+00,    9.691E+00,    1.067E+01,,     0.372
C,U-235    ,NO ,   -1.312E+00,    1.470E+01,    1.812E+01,,    -0.072
C,U-238    ,NO ,    1.205E+01,    2.240E+02,    3.116E+02,,     0.039
C,AM-241   ,NO ,    7.290E+00,    7.886E+00,    1.168E+01,,     0.624
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Sec. Review: KD Analyst: LIMS: C

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 11-AUG-2006 15:59:43.54
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 11-AUG-2006 14:54:35.53

LIMS No., Customer Name, Client ID: L29557-4 WG EX/DRES

Sample ID	: 07L29557-4			Smple Date:	10-AUG-2006 16:00:00.
Sample Type	: WG			Geometry	: 073L082504
Quantity	: 3.01590E+00 L			BKGFILE	: 07BG072806MT
Start Channel	: 40	Energy Tol	: 1.00000	Real Time	: 0 01:05:01.62
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 01:05:00.75
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	294.98*	96	78	1.17	591.70	1.81E+00	2.47E-02	19.7	2.54E+00
2	1	351.63*	186	53	1.32	705.21	1.61E+00	4.78E-02	10.5	3.29E+00
3	1	608.99*	154	35	1.59	1220.67	1.09E+00	3.94E-02	12.0	9.67E-01
4	1	768.11	33	7	1.86	1539.19	9.20E-01	8.35E-03	25.7	1.16E+00
5	1	1120.31*	48	3	2.70	2243.68	7.03E-01	1.22E-02	16.9	7.00E-01
6	1	1238.12*	22	2	3.02	2479.17	6.55E-01	5.56E-03	26.0	1.70E+00
7	1	1765.14*	35	0	3.29	3531.72	5.12E-01	9.01E-03	18.2	2.43E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29557-4 Acquisition date : 11-AUG-2006 14:54:35

Total number of lines in spectrum	7	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 3
Sample ID : 07L29557-4 Acquisition date : 11-AUG-2006 14:54:35

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	294.98	96	78	1.17	591.70	587	9	2.47E-02	39.4	1.81E+00	
1	351.63	186	53	1.32	705.21	700	10	4.78E-02	20.9	1.61E+00	
1	608.99	154	35	1.59	1220.67	1215	14	3.94E-02	24.0	1.09E+00	
1	768.11	33	7	1.86	1539.19	1533	13	8.35E-03	51.4	9.20E-01	
1	1120.31	48	3	2.70	2243.68	2238	12	1.22E-02	33.8	7.03E-01	
1	1238.12	22	2	3.02	2479.17	2474	9	5.56E-03	52.0	6.55E-01	
1	1765.14	35	0	3.29	3531.72	3526	12	9.01E-03	36.3	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 7
Number of unidentified lines 7
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	9.495E+00		3.080E+01	5.171E+01	0.000E+00	0.184
NA-24	2.916E+00		1.015E+01	1.793E+01	0.000E+00	0.163
K-40	-4.351E+01		4.369E+01	8.760E+01	0.000E+00	-0.497
CR-51	1.148E+01		2.891E+01	4.967E+01	0.000E+00	0.231
MN-54	1.341E+00		3.662E+00	6.363E+00	0.000E+00	0.211
CO-57	6.500E-01		3.475E+00	5.681E+00	0.000E+00	0.114
CO-58	6.500E-01		3.028E+00	5.196E+00	0.000E+00	0.125
FE-59	-8.201E-01		6.463E+00	1.023E+01	0.000E+00	-0.080
CO-60	2.322E+00		3.503E+00	6.581E+00	0.000E+00	0.353
ZN-65	4.658E+00		6.662E+00	1.132E+01	0.000E+00	0.411
SE-75	1.596E+00		4.353E+00	7.509E+00	0.000E+00	0.213
SR-85	-1.623E+01		4.837E+00	5.119E+00	0.000E+00	-3.170
Y-88	2.125E+00		4.505E+00	8.061E+00	0.000E+00	0.264
NB-94	7.547E-01		3.657E+00	6.266E+00	0.000E+00	0.120
NB-95	5.705E+00		3.762E+00	6.975E+00	0.000E+00	0.818
ZR-95	-2.273E+00		6.063E+00	9.541E+00	0.000E+00	-0.238
MO-99	5.048E+00		3.494E+01	5.935E+01	0.000E+00	0.085
RU-103	-2.283E+00		3.783E+00	5.662E+00	0.000E+00	-0.403
RU-106	-1.116E+00		2.803E+01	4.697E+01	0.000E+00	-0.024
AG-110m	-2.384E+00		3.456E+00	5.277E+00	0.000E+00	-0.452
SN-113	-1.738E+00		4.437E+00	6.957E+00	0.000E+00	-0.250

SB-124	-1.019E+00	3.891E+00	5.123E+00	0.000E+00	-0.199
SB-125	-4.718E+00	9.590E+00	1.469E+01	0.000E+00	-0.321
TE-129M	9.172E-01	3.867E+01	6.300E+01	0.000E+00	0.015
I-131	-7.029E-01	3.186E+00	5.101E+00	0.000E+00	-0.138
BA-133	3.103E+00	4.970E+00	7.846E+00	0.000E+00	0.396
CS-134	7.604E-01	3.578E+00	5.200E+00	0.000E+00	0.146
CS-136	5.512E-01	3.244E+00	5.521E+00	0.000E+00	0.100
CS-137	7.968E-01	3.816E+00	6.573E+00	0.000E+00	0.121
CE-139	2.152E+00	3.523E+00	5.868E+00	0.000E+00	0.367
BA-140	8.803E+00	1.272E+01	2.235E+01	0.000E+00	0.394
LA-140	3.210E+00	4.396E+00	8.282E+00	0.000E+00	0.388
CE-141	-2.021E+00	5.829E+00	9.074E+00	0.000E+00	-0.223
CE-144	-6.087E+00	2.794E+01	4.417E+01	0.000E+00	-0.138
EU-152	2.424E+00	1.093E+01	1.843E+01	0.000E+00	0.131
EU-154	-1.355E+00	7.285E+00	1.158E+01	0.000E+00	-0.117
RA-226	2.449E+01	1.001E+02	1.702E+02	0.000E+00	0.144
AC-228	-4.396E+00	1.192E+01	2.142E+01	0.000E+00	-0.205
TH-228	-1.070E+01	7.438E+00	1.200E+01	0.000E+00	-0.892
TH-232	-4.394E+00	1.191E+01	2.141E+01	0.000E+00	-0.205
U-235	8.683E+00	2.721E+01	4.501E+01	0.000E+00	0.193
U-238	1.021E+02	4.461E+02	7.601E+02	0.000E+00	0.134
AM-241	-1.901E+01	3.063E+01	4.823E+01	0.000E+00	-0.394

```
A,07L29557-4       ,08/11/2006 15:59,08/10/2006 16:00,   3.016E+00,L29557-4 WG EX
B,07L29557-4       ,LIBD                ,08/11/2006 09:47,073L082504
C,BE-7     ,NO ,    9.495E+00,    3.080E+01,    5.171E+01,,     0.184
C,NA-24    ,NO ,    2.916E+00,    1.015E+01,    1.793E+01,,     0.163
C,K-40     ,NO ,   -4.351E+01,    4.369E+01,    8.760E+01,,    -0.497
C,CR-51    ,NO ,    1.148E+01,    2.891E+01,    4.967E+01,,     0.231
C,MN-54    ,NO ,    1.341E+00,    3.662E+00,    6.363E+00,,     0.211
C,CO-57    ,NO ,    6.500E-01,    3.475E+00,    5.681E+00,,     0.114
C,CO-58    ,NO ,    6.500E-01,    3.028E+00,    5.196E+00,,     0.125
C,FE-59    ,NO ,   -8.201E-01,    6.463E+00,    1.023E+01,,    -0.080
C,CO-60    ,NO ,    2.322E+00,    3.503E+00,    6.581E+00,,     0.353
C,ZN-65    ,NO ,    4.658E+00,    6.662E+00,    1.132E+01,,     0.411
C,SE-75    ,NO ,    1.596E+00,    4.353E+00,    7.509E+00,,     0.213
C,SR-85    ,NO ,   -1.623E+01,    4.837E+00,    5.119E+00,,    -3.170
C,Y-88     ,NO ,    2.125E+00,    4.505E+00,    8.061E+00,,     0.264
C,NB-94    ,NO ,    7.547E-01,    3.657E+00,    6.266E+00,,     0.120
C,NB-95    ,NO ,    5.705E+00,    3.762E+00,    6.975E+00,,     0.818
C,ZR-95    ,NO ,   -2.273E+00,    6.063E+00,    9.541E+00,,    -0.238
C,MO-99    ,NO ,    5.048E+00,    3.494E+01,    5.935E+01,,     0.085
C,RU-103   ,NO ,   -2.283E+00,    3.783E+00,    5.662E+00,,    -0.403
C,RU-106   ,NO ,   -1.116E+00,    2.803E+01,    4.697E+01,,    -0.024
C,AG-110m  ,NO ,   -2.384E+00,    3.456E+00,    5.277E+00,,    -0.452
C,SN-113   ,NO ,   -1.738E+00,    4.437E+00,    6.957E+00,,    -0.250
C,SB-124   ,NO ,   -1.019E+00,    3.891E+00,    5.123E+00,,    -0.199
C,SB-125   ,NO ,   -4.718E+00,    9.590E+00,    1.469E+01,,    -0.321
C,TE-129M  ,NO ,    9.172E-01,    3.867E+01,    6.300E+01,,     0.015
C,I-131    ,NO ,   -7.029E-01,    3.186E+00,    5.101E+00,,    -0.138
C,BA-133   ,NO ,    3.103E+00,    4.970E+00,    7.846E+00,,     0.396
C,CS-134   ,NO ,    7.604E-01,    3.578E+00,    5.200E+00,,     0.146
C,CS-136   ,NO ,    5.512E-01,    3.244E+00,    5.521E+00,,     0.100
C,CS-137   ,NO ,    7.968E-01,    3.816E+00,    6.573E+00,,     0.121
C,CE-139   ,NO ,    2.152E+00,    3.523E+00,    5.868E+00,,     0.367
C,BA-140   ,NO ,    8.803E+00,    1.272E+01,    2.235E+01,,     0.394
C,LA-140   ,NO ,    3.210E+00,    4.396E+00,    8.282E+00,,     0.388
C,CE-141   ,NO ,   -2.021E+00,    5.829E+00,    9.074E+00,,    -0.223
C,CE-144   ,NO ,   -6.087E+00,    2.794E+01,    4.417E+01,,    -0.138
C,EU-152   ,NO ,    2.424E+00,    1.093E+01,    1.843E+01,,     0.131
C,EU-154   ,NO ,   -1.355E+00,    7.285E+00,    1.158E+01,,    -0.117
C,RA-226   ,NO ,    2.449E+01,    1.001E+02,    1.702E+02,,     0.144
C,AC-228   ,NO ,   -4.396E+00,    1.192E+01,    2.142E+01,,    -0.205
C,TH-228   ,NO ,   -1.070E+01,    7.438E+00,    1.200E+01,,    -0.892
C,TH-232   ,NO ,   -4.394E+00,    1.191E+01,    2.141E+01,,    -0.205
C,U-235    ,NO ,    8.683E+00,    2.721E+01,    4.501E+01,,     0.193
C,U-238    ,NO ,    1.021E+02,    4.461E+02,    7.601E+02,,     0.134
C,AM-241   ,NO ,   -1.901E+01,    3.063E+01,    4.823E+01,,    -0.394
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29576

Exelon

August 16, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29576
EX001-3ESPDRES-06

08/16/2006 15:10

Sample Receipt

The following samples were received on August 12, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	
WG-DN-MW-DN-119I-081106-GL-018	L29576-2	
WG-DN-MW-DN-115I-081106-GL-019	L29576-3	
WG-DN-MW-DN-114S-081106-GL-020	L29576-4	
WG-DN-MW-DN-114S-081106-GL-021	L29576-5	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3 (DIST)	TBE-2010	
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29576
EX001-3ESPDRES-06

08/16/2006 15:10

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4314.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	WG4314-1

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4320.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	WG4320-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29576
EX001-3ESPDRES-06

08/16/2006 15:10

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4323.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	WG4323-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

08/14/06 08:40

SR #: SR09902

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06 LIMS #: L29576

Initiated By: PMARSHALL
Init Date: 08/14/06 Receive Date: 08/12/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	N	Gamma portion of samples required 5mL of nitric to bring pH to 2.
9	Other (Describe)	NA	

L29576

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45130-23-0015

PROJECT NAME: EXCELON / DRESDEN FACILITY

SAMPLER'S SIGNATURE: Rachel B. Nashett **PRINTED NAME:** RACHEL NASHETT

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Gamma Spec 6R 8T/90	PARAMETERS: TRITIUM	REMARKS
	8-11-06	0900	WG-DN-MW-DN-119S-080606-GL-017	H_2O	2	X	X	
		0910	" " " " 119I " " -018	H_2O	2	X	X	
		1130	" " " " 116I " " -019	H_2O	2	X	X	
		1315	" " " " 114S " " -026	H_2O	2	X	X	
		1340	" " " " 114S " " -021	H_2O	2	X	X	
			TOTAL NUMBER OF CONTAINERS		10			

RELINQUISHED BY: ① Rachel B. Nashett	DATE: 8-11-06 TIME: 1400	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: G. LEWIS, R. NASHETT

RECEIVED FOR LABORATORY BY: Donna Wilds
DATE: 8/12/06 TIME: 11:30

004760

1001-00(SOURCE)GN-CO004

AUG 1 4 2006

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

August 14, 2006

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on August 12, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by August 17, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-MW-DN-119S-081106-GL-0	**L29576-1**		**08/11/06:0900**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-119I-081106-GL-0	**L29576-2**		**08/11/06:0910**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-115I-081106-GL-0	**L29576-3**		**08/11/06:1130**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-114S-081106-GL-0	**L29576-4**		**08/11/06:1315**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-114S-081106-GL-0	**L29576-5**		**08/11/06:1340**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		

End of document

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L29576-1 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 10:08	029728	Lauren Larsen	030854	Donna Webb
08/15/2006 10:09	099999	Sample Custodian	030854	Donna Webb
08/15/2006 10:09	030854	Donna Webb	099999	Sample Custodian
08/15/2006 10:10	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29576-1 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen

****

Sample # L29576-2 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 10:08	029728	Lauren Larsen	030854	Donna Webb
08/15/2006 10:09	099999	Sample Custodian	030854	Donna Webb
08/15/2006 10:09	030854	Donna Webb	099999	Sample Custodian
08/15/2006 10:10	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29576-2 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian

****

Sample # L29576-2 Containernum 2

Relinquish Date			Received By	
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen

****

Sample # L29576-3 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 10:08	029728	Lauren Larsen	030854	Donna Webb
08/15/2006 10:09	099999	Sample Custodian	030854	Donna Webb
08/15/2006 10:09	030854	Donna Webb	099999	Sample Custodian
08/15/2006 10:10	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29576-3 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen

****

Sample # L29576-4 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 10:08	029728	Lauren Larsen	030854	Donna Webb
08/15/2006 10:09	099999	Sample Custodian	030854	Donna Webb
08/15/2006 10:09	030854	Donna Webb	099999	Sample Custodian
08/15/2006 10:10	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29576-4 Containernum 2

Prod	Analyst
H-3 (DIST)	DW

****

Sample # L29576-4 Containernum 2

GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen

****

Sample # L29576-5 Containernum 1

Prod	Analyst
SR-90 (FAST)	LCB
H-3 (DIST)	DW
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 10:08	029728	Lauren Larsen	030854	Donna Webb
08/15/2006 10:09	099999	Sample Custodian	030854	Donna Webb
08/15/2006 10:09	030854	Donna Webb	099999	Sample Custodian
08/15/2006 10:10	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29576-5 Containernum 2

Prod	Analyst
SR-90 (FAST)	LCB
H-3 (DIST)	DW
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/12/2006 00:00			099999	Sample Custodian
08/14/2006 11:16	099999	Sample Custodian	030854	Donna Webb
08/15/2006 09:04	030854	Donna Webb	029728	Lauren Larsen

08/16/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29576

****

L29576-1 **WG** **WG-DN-MW-DN-119S-081106-GL-017**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/12/06
Aliquot	GELI	DW	08/14/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Aliquot	H-3 (DIST)	DW	08/15/06
Count Room	GELI	ILL	08/14/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29576-2 **WG** **WG-DN-MW-DN-119I-081106-GL-018**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/12/06
Aliquot	GELI	DW	08/14/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Aliquot	H-3 (DIST)	DW	08/15/06
Count Room	GELI	ILL	08/14/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29576-3 **WG** **WG-DN-MW-DN-115I-081106-GL-019**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/12/06
Aliquot	GELI	DW	08/14/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Aliquot	H-3 (DIST)	DW	08/15/06
Count Room	GELI	ILL	08/14/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90 (FAST)	KOJ	08/15/06

****

L29576-4 **WG** **WG-DN-MW-DN-114S-081106-GL-020**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/12/06
Aliquot	GELI	DW	08/14/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Aliquot	H-3 (DIST)	DW	08/15/06
Count Room	GELI	ILL	08/14/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

****

L29576-5 **WG** **WG-DN-MW-DN-114S-081106-GL-021**

Process step	Prod	Analyst	Date
Login		RCHARLES	08/12/06
Aliquot	GELI	DW	08/14/06
Aliquot	SR-90 (FAST)	LCB	08/14/06
Aliquot	H-3 (DIST)	DW	08/15/06
Count Room	GELI	ILL	08/14/06

08/16/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29576

L29576-5	**WG**	**WG-DN-MW-DN-114S-081106-GL-021**	
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

Analytical Results Summary

Report of Analysis

08/16/06 13:09

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29576

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-119S-081106-GL-017** Collect Start: 08/11/2006 09:00 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/12/2006 % Moisture:
LIMS Number: L29576-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-2.60E+01	1.09E+02	**1.83E+02**	pCi/L		10	ml		08/15/06	60	M	U		
TOTAL SR	2018	2.50E-01	7.05E-01	**1.44E+00**	pCi/L		450	ml	08/11/06 09:00	08/15/06	80	M	U		
MN-54	2007	-4.42E-01	3.52E+00	**5.60E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
CO-58	2007	6.65E-01	3.61E+00	**6.02E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
FE-59	2007	7.50E-01	6.63E+00	**1.12E+01**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
CO-60	2007	-3.85E-01	3.25E+00	**5.20E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
ZN-65	2007	-1.89E+00	8.25E+00	**1.12E+01**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
NB-95	2007	1.73E+00	4.38E+00	**6.62E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
ZR-95	2007	-1.95E+00	6.17E+00	**9.62E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
CS-134	2007	-4.02E-01	3.65E+00	**5.16E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
CS-137	2007	3.32E+00	3.69E+00	**6.75E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
BA-140	2007	-8.09E+00	1.19E+01	**1.80E+01**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No
LA-140	2007	-1.39E+00	4.42E+00	**6.60E+00**	pCi/L		2869.35	ml	08/11/06 09:00	08/14/06	4501	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 13:09

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29576

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-119I-081106-GL-018** (WG)
Station:
Description:
LIMS Number: L29576-2

Collect Start: 08/11/2006 09:10
Collect Stop:
Receive Date: 08/12/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**1.47E+03**	2.11E+02	2.16E+02	pCi/L		10	ml		08/15/06	42.81	M	+		
TOTAL SR	2018	5.34E-01	7.15E-01	**1.29E+00**	pCi/L		450	ml	08/11/06 09:10	08/15/06	200	M	U		
MN-54	2007	6.89E-01	2.65E+00	**5.02E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
CO-58	2007	-3.67E-01	2.56E+00	**4.63E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
FE-59	2007	-1.77E+00	5.79E+00	**1.00E+01**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
CO-60	2007	1.44E+00	2.88E+00	**5.96E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
ZN-65	2007	-2.01E+00	7.01E+00	**1.03E+01**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
NB-95	2007	1.54E+00	3.20E+00	**6.06E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
ZR-95	2007	-3.73E-01	5.23E+00	**9.41E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
CS-134	2007	-7.63E-01	3.49E+00	**5.27E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
CS-137	2007	-2.55E-01	2.75E+00	**5.01E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
BA-140	2007	-2.29E+00	1.12E+01	**2.01E+01**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No
LA-140	2007	-1.10E+00	3.42E+00	**6.27E+00**	pCi/L		3136.96	ml	08/11/06 09:10	08/14/06	5761	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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H = High recovery

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No = Peak not identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 13:09

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29576

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-115I-081106-GL-019** (WG)
Station:
Description:
LIMS Number: L29576-3

Collect Start: 08/11/2006 11:30
Collect Stop:
Receive Date: 08/12/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	1.17E+02	1.17E+02	**1.81E+02**	pCi/L		10	ml		08/15/06	60	M	U		
TOTAL SR	2018	-6.49E-01	8.60E-01	**1.71E+00**	pCi/L		450	ml	08/11/06 11:30	08/15/06	200	M	U		
MN-54	2007	-1.41E+00	3.31E+00	**5.13E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
CO-58	2007	-2.14E+00	4.15E+00	**5.97E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
FE-59	2007	2.19E+00	8.32E+00	**1.44E+01**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
CO-60	2007	-2.91E-01	4.63E+00	**8.34E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
ZN-65	2007	-3.47E+00	1.03E+01	**1.33E+01**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
NB-95	2007	3.01E+00	3.71E+00	**6.33E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
ZR-95	2007	-6.61E+00	6.48E+00	**8.07E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
CS-134	2007	-1.62E+00	3.76E+00	**4.80E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
CS-137	2007	4.73E-01	4.64E+00	**7.62E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
BA-140	2007	-2.73E+00	1.63E+01	**2.62E+01**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No
LA-140	2007	-7.74E-02	5.91E+00	**9.88E+00**	pCi/L		3081.1	ml	08/11/06 11:30	08/14/06	4021	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

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No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 13:09

L29576

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Sample ID: **WG-DN-MW-DN-114S-081106-GL-020** (WG)
Station:
Description:
LIMS Number: L29576-4

Collect Start: 08/11/2006 13:15
Collect Stop:
Receive Date: 08/12/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**2.77E+03**	3.36E+02	2.79E+02	pCi/L		10	ml		08/15/06	26.04	M	+	High	
TOTAL SR	2018	3.79E-01	8.18E-01	**1.65E+00**	pCi/L		450	ml	08/11/06 13:15	08/16/06	80	M	U		
MN-54	2007	-8.43E-01	2.16E+00	**3.36E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
CO-58	2007	-3.55E-01	2.29E+00	**3.66E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
FE-59	2007	7.71E-01	4.08E+00	**6.92E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
CO-60	2007	4.23E-01	2.34E+00	**3.91E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
ZN-65	2007	-8.38E+00	4.99E+00	**6.86E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
NB-95	2007	-5.79E-01	2.29E+00	**3.65E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
ZR-95	2007	-8.70E-02	3.54E+00	**5.77E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
CS-134	2007	1.18E-01	2.39E+00	**3.46E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
CS-137	2007	-2.15E+00	2.25E+00	**3.38E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
BA-140	2007	7.02E+00	8.47E+00	**1.50E+01**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No
LA-140	2007	5.15E-01	2.75E+00	**4.57E+00**	pCi/L		2867.63	ml	08/11/06 13:15	08/14/06	10892	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/16/06 13:09

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29576

Conestoga-Rovers & Associates

EX001-3ESPDRES-06

Kathy Shaw

Sample ID: **WG-DN-MW-DN-114S-081106-GL-021** (WG)
Station:
Description:
LIMS Number: L29576-5

Collect Start: 08/11/2006 13:40
Collect Stop:
Receive Date: 08/12/2006

Matrix: Ground Water
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**2.74E+03**	3.35E+02	2.82E+02	pCi/L		10	ml		08/15/06	26.9	M	+	High	
TOTAL SR	2018	-2.02E-01	6.56E-01	**1.44E+00**	pCi/L		450	ml	08/11/06 13:40	08/16/06	80	M	U		
MN-54	2007	4.10E-01	2.53E+00	**4.62E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
CO-58	2007	-4.68E-01	2.75E+00	**4.82E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
FE-59	2007	-4.11E+00	5.73E+00	**9.21E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
CO-60	2007	-5.87E-01	2.22E+00	**4.08E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
ZN-65	2007	6.12E-01	5.47E+00	**8.78E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
NB-95	2007	-4.30E-01	2.43E+00	**4.30E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
ZR-95	2007	8.34E-01	4.92E+00	**8.93E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
CS-134	2007	1.22E-02	2.81E+00	**4.38E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
CS-137	2007	-1.92E+00	2.93E+00	**4.90E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
BA-140	2007	8.37E+00	1.07E+01	**2.04E+01**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No
LA-140	2007	-2.74E-01	3.02E+00	**5.70E+00**	pCi/L		3088.86	ml	08/11/06 13:40	08/14/06	7538	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L29576

8/16/2006 3:09:38PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4320-1	H-3 (DIST)	WO	08/15/2006 14:44	< 1.880E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4320-2	H-3 (DIST)	WO	08/15/2006 15:48	5.05E+002	5.230E+02	pCi/Total	103.6	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4320-3 L29576-1	H-3 (DIST)	WG	08/15/2006 16:06	< 1.830E+02	< 1.860E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L29576

8/16/2006 3:09:38PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4323-1	TOTAL SR	WO	08/15/2006 18:45	< 7.680E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4323-2	TOTAL SR	WO	08/15/2006 18:45	5.84E+001	6.350E+01	pCi/Total	108.8	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4323-3 L29576-1	TOTAL SR	WG	08/15/2006 18:45	< 1.440E+00	< 1.700E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Aug 16 2006, 01:24 pm

Work Order: *L29576* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29576-1		H-3 DIST		10 ml			0		15-aug-06 17:10	LS7	112	60	1.98	60	.208		DW
WG-DN-MW-DN-119S-081106-GL-017																	
Activity: -2.6E+01 Error: 1.09E+02			MDC: 1.83E+02 *														
L29576-2		H-3 DIST		10 ml			0		15-aug-06 18:14	LS7	376	42.81	1.98	60	.209		DW
WG-DN-MW-DN-119I-081106-GL-018																	
Activity: 1.47E+03 * Error: 2.11E+02			MDC: 2.16E+02														
L29576-3		H-3 DIST		10 ml			0		15-aug-06 19:00	LS7	152	60	1.98	60	.211		DW
WG-DN-MW-DN-115I-081106-GL-019																	
Activity: 1.17E+02 Error: 1.17E+02			MDC: 1.81E+02 *														
L29576-4		H-3 DIST		10 ml			0		15-aug-06 20:03	LS7	384	26.04	1.98	60	.208		DW
WG-DN-MW-DN-114S-081106-GL-020																	
Activity: 2.77E+03 * Error: 3.36E+02			MDC: 2.79E+02														
L29576-5		H-3 DIST		10 ml			0		15-aug-06 20:32	LS7	384	26.9	1.98	60	.202		DW
WG-DN-MW-DN-114S-081106-GL-021																	
Activity: 2.74E+03 * Error: 3.35E+02			MDC: 2.82E+02														

Work Order: *L29576* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29576-1		TOTAL SR	11-aug-06 09:00	450 ml	15-aug-06 13:45		0	90.11	15-aug-06 18:45	X3C	65	80	294	400	.345	1	LCB
WG-DN-MW-DN-119S-081106-GL-017																	
Activity: 2.5E-01	Error: 7.05E-01		MDC: 1.44E+00 *														
L29576-2		TOTAL SR	11-aug-06 09:10	450 ml	15-aug-06 13:45		0	62.91	15-aug-06 20:45	X4C	173	200	299	400	.35	1	LCB
WG-DN-MW-DN-119I-081106-GL-018																	
Activity: 5.34E-01	Error: 7.15E-01		MDC: 1.29E+00 *														
L29576-3		TOTAL SR	11-aug-06 11:30	450 ml	15-aug-06 13:45		0	50.27	15-aug-06 20:45	X4D	147	200	340	400	.353	1	LCB
WG-DN-MW-DN-115I-081106-GL-019																	
Activity: -6.49E-01	Error: 8.6E-01		MDC: 1.71E+00 *														
L29576-4		TOTAL SR	11-aug-06 13:15	450 ml	15-aug-06 13:45		0	80.22	16-aug-06 13:15	X1A	70	80	308	400	.346	1	LCB
WG-DN-MW-DN-114S-081106-GL-020																	
Activity: 3.79E-01	Error: 8.18E-01		MDC: 1.65E+00 *														
L29576-5		TOTAL SR	11-aug-06 13:40	450 ml	15-aug-06 13:45		0	97.25	16-aug-06 13:15	X1B	63	80	342	400	.343	1	LCB
WG-DN-MW-DN-114S-081106-GL-021																	
Activity: -2.02E-01	Error: 6.56E-01		MDC: 1.44E+00 *														

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 18:09:21.12
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 14-AUG-2006 15:33:36.58

LIMS No., Customer Name, Client ID: WG4314-1 WG EX/DRES

Sample ID	: 04WG4314-1			Smple Date	: 11-AUG-2006 09:00:00.
Sample Type	: WG			Geometry	: 043L082004
Quantity	: 2.86930E+00 L			BKGFILE	: 04BG072806MT
Start Channel	: 90	Energy Tol	: 1.00000	Real Time	: 0 02:35:34.31
End Channel	: 4090	Pk Srch Sens	: 5.00000	Live time	: 0 02:35:32.55
MDA Constant	: 0.00	Library Used	: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.24*	68	277	1.23	133.41	6.61E-01	7.24E-03	44.0	1.55E+00
2	1	139.51*	55	261	1.81	279.97	2.04E+00	5.85E-03	56.5	2.03E+00
3	1	198.35*	64	197	1.09	397.67	1.87E+00	6.85E-03	41.2	1.10E+00
4	2	238.59*	9	118	1.28	478.17	1.68E+00	1.01E-03	197.2	1.67E+00
5	2	242.12	84	134	1.35	485.24	1.66E+00	9.04E-03	26.7	
6	1	295.45*	167	175	1.36	591.91	1.45E+00	1.79E-02	19.3	3.77E+00
7	1	351.83*	294	135	1.21	704.67	1.28E+00	3.15E-02	10.1	7.17E-01
8	1	500.52	48	61	2.01	1002.05	9.85E-01	5.17E-03	33.9	4.98E+00
9	1	583.03*	15	54	1.99	1167.08	8.77E-01	1.63E-03	97.9	3.29E+00
10	1	609.19*	256	51	1.49	1219.39	8.49E-01	2.75E-02	8.5	1.51E+00
11	1	767.84	70	78	6.29	1536.66	7.10E-01	7.53E-03	36.4	4.61E+00
12	1	1120.04*	75	15	2.43	2240.87	5.27E-01	8.01E-03	16.9	1.25E+00
13	1	1333.62	27	23	0.79	2667.84	4.60E-01	2.85E-03	36.6	6.84E+00
14	1	1378.88	53	16	1.58	2758.32	4.49E-01	5.67E-03	18.2	1.91E+01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	9	44.60*	1.680E+00	1.269E+00	1.274E+00	394.44
	240.98	------	3.95	1.669E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04WG4314-1 Acquisition date : 14-AUG-2006 15:33:36

Total number of lines in spectrum	14	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	2	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.269E+00	1.274E+00	5.024E+00	394.44	
	Total Activity :		1.269E+00	1.274E+00			
	Grand Total Activity :		1.269E+00	1.274E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04WG4314-1

Acquisition date : 14-AUG-2006 15:33:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.24	68	277	1.23	133.41	130	7	7.24E-03	88.0	6.61E-01	
1	139.51	55	261	1.81	279.97	276	9	5.85E-03	****	2.04E+00	
1	198.35	64	197	1.09	397.67	393	8	6.85E-03	82.4	1.87E+00	
2	242.12	84	134	1.35	485.24	475	20	9.04E-03	53.4	1.66E+00	
1	295.45	167	175	1.36	591.91	585	14	1.79E-02	38.6	1.45E+00	
1	351.83	294	135	1.21	704.67	698	12	3.15E-02	20.2	1.28E+00	
1	500.52	48	61	2.01	1002.05	996	11	5.17E-03	67.7	9.85E-01	
1	583.03	15	54	1.99	1167.08	1165	10	1.63E-03	****	8.77E-01	T
1	609.19	256	51	1.49	1219.39	1215	10	2.75E-02	17.0	8.49E-01	
1	767.84	70	78	6.29	1536.66	1528	26	7.53E-03	72.9	7.10E-01	
1	1120.04	75	15	2.43	2240.87	2232	15	8.01E-03	33.9	5.27E-01	
1	1333.62	27	23	0.79	2667.84	2663	11	2.85E-03	73.2	4.60E-01	
1	1378.88	53	16	1.58	2758.32	2750	14	5.67E-03	36.3	4.49E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	2	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.269E+00	1.274E+00	5.024E+00	394.44	
		Total Activity :	1.269E+00	1.274E+00			
		Grand Total Activity :	1.269E+00	1.274E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	1.274E+00	5.024E+00	7.331E+00	0.000E+00	0.174

---- Non-Identified Nuclides ----

	Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided	(pCi/L)		
BE-7	-2.755E+00	2.164E+01	3.536E+01	0.000E+00	-0.078
NA-24	4.371E+01	9.208E+01	1.634E+02	0.000E+00	0.268
K-40	1.511E+01	4.610E+01	8.959E+01	0.000E+00	0.169
CR-51	8.884E+00	2.103E+01	3.659E+01	0.000E+00	0.243
MN-54	-9.052E-01	2.562E+00	4.144E+00	0.000E+00	-0.218
CO-57	5.863E-01	2.247E+00	3.758E+00	0.000E+00	0.156
CO-58	-2.668E+00	2.768E+00	3.845E+00	0.000E+00	-0.694
FE-59	-1.928E+00	5.209E+00	8.167E+00	0.000E+00	-0.236
CO-60	-1.749E-01	3.827E+00	6.063E+00	0.000E+00	-0.029
ZN-65	-3.371E+00	6.123E+00	7.708E+00	0.000E+00	-0.437
SE-75	-1.930E+00	3.366E+00	5.119E+00	0.000E+00	-0.377
SR-85	-9.137E+00	3.589E+00	4.911E+00	0.000E+00	-1.861
Y-88	-9.726E-01	2.592E+00	3.949E+00	0.000E+00	-0.246
NB-94	7.515E-01	2.565E+00	4.267E+00	0.000E+00	0.176
NB-95	2.416E+00	2.917E+00	5.087E+00	0.000E+00	0.475
ZR-95	3.095E+00	4.615E+00	7.998E+00	0.000E+00	0.387
MO-99	-1.020E+01	4.225E+01	6.569E+01	0.000E+00	-0.155
RU-103	-2.411E+00	2.990E+00	3.854E+00	0.000E+00	-0.626
RU-106	-1.636E+01	2.458E+01	3.704E+01	0.000E+00	-0.442
AG-110m	-2.410E+00	2.350E+00	3.297E+00	0.000E+00	-0.731
SN-113	1.105E+00	3.251E+00	5.578E+00	0.000E+00	0.198
SB-124	-6.147E-01	2.827E+00	4.342E+00	0.000E+00	-0.142
SB-125	-3.729E+00	7.282E+00	1.160E+01	0.000E+00	-0.321
TE-129M	1.207E+01	3.460E+01	5.880E+01	0.000E+00	0.205
I-131	2.835E-01	3.322E+00	5.614E+00	0.000E+00	0.051
BA-133	-1.722E+00	3.965E+00	5.624E+00	0.000E+00	-0.306
CS-134	1.737E+00	2.903E+00	4.468E+00	0.000E+00	0.389
CS-136	-1.219E+00	2.807E+00	4.490E+00	0.000E+00	-0.271
CS-137	8.150E-01	2.701E+00	4.524E+00	0.000E+00	0.180
CE-139	1.110E+00	2.368E+00	3.956E+00	0.000E+00	0.281
BA-140	-6.404E+00	1.041E+01	1.599E+01	0.000E+00	-0.401
LA-140	6.395E-01	3.457E+00	5.978E+00	0.000E+00	0.107
CE-141	8.376E-02	4.373E+00	7.171E+00	0.000E+00	0.012
CE-144	-1.237E+01	1.856E+01	2.947E+01	0.000E+00	-0.420
EU-152	1.241E+00	8.223E+00	1.399E+01	0.000E+00	0.089
EU-154	-4.136E-01	4.659E+00	7.649E+00	0.000E+00	-0.054
RA-226	-8.241E-01	6.733E+01	1.115E+02	0.000E+00	-0.007
AC-228	-1.352E+01	1.066E+01	1.613E+01	0.000E+00	-0.838
TH-232	-1.351E+01	1.065E+01	1.611E+01	0.000E+00	-0.838
U-235	1.444E+00	2.075E+01	3.054E+01	0.000E+00	0.047
U-238	-2.532E+01	2.768E+02	4.546E+02	0.000E+00	-0.056
AM-241	-1.886E+01	2.387E+01	3.881E+01	0.000E+00	-0.486

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A,04WG4314-1       ,08/14/2006 18:09,08/11/2006 09:00,   2.869E+00,WG4314-1 WG EX
B,04WG4314-1       ,LIBD                ,08/14/2006 09:43,043L082004
C,TH-228   ,YES,    1.274E+00,   5.024E+00,   7.331E+00,,     0.174
C,BE-7     ,NO ,   -2.755E+00,   2.164E+01,   3.536E+01,,    -0.078
C,NA-24    ,NO ,    4.371E+01,   9.208E+01,   1.634E+02,,     0.268
C,K-40     ,NO ,    1.511E+01,   4.610E+01,   8.959E+01,,     0.169
C,CR-51    ,NO ,    8.884E+00,   2.103E+01,   3.659E+01,,     0.243
C,MN-54    ,NO ,   -9.052E-01,   2.562E+00,   4.144E+00,,    -0.218
C,CO-57    ,NO ,    5.863E-01,   2.247E+00,   3.758E+00,,     0.156
C,CO-58    ,NO ,   -2.668E+00,   2.768E+00,   3.845E+00,,    -0.694
C,FE-59    ,NO ,   -1.928E+00,   5.209E+00,   8.167E+00,,    -0.236
C,CO-60    ,NO ,   -1.749E-01,   3.827E+00,   6.063E+00,,    -0.029
C,ZN-65    ,NO ,   -3.371E+00,   6.123E+00,   7.708E+00,,    -0.437
C,SE-75    ,NO ,   -1.930E+00,   3.366E+00,   5.119E+00,,    -0.377
C,SR-85    ,NO ,   -9.137E+00,   3.589E+00,   4.911E+00,,    -1.861
C,Y-88     ,NO ,   -9.726E-01,   2.592E+00,   3.949E+00,,    -0.246
C,NB-94    ,NO ,    7.515E-01,   2.565E+00,   4.267E+00,,     0.176
C,NB-95    ,NO ,    2.416E+00,   2.917E+00,   5.087E+00,,     0.475
C,ZR-95    ,NO ,    3.095E+00,   4.615E+00,   7.998E+00,,     0.387
C,MO-99    ,NO ,   -1.020E+01,   4.225E+01,   6.569E+01,,    -0.155
C,RU-103   ,NO ,   -2.411E+00,   2.990E+00,   3.854E+00,,    -0.626
C,RU-106   ,NO ,   -1.636E+01,   2.458E+01,   3.704E+01,,    -0.442
C,AG-110m  ,NO ,   -2.410E+00,   2.350E+00,   3.297E+00,,    -0.731
C,SN-113   ,NO ,    1.105E+00,   3.251E+00,   5.578E+00,,     0.198
C,SB-124   ,NO ,   -6.147E-01,   2.827E+00,   4.342E+00,,    -0.142
C,SB-125   ,NO ,   -3.729E+00,   7.282E+00,   1.160E+01,,    -0.321
C,TE-129M  ,NO ,    1.207E+01,   3.460E+01,   5.880E+01,,     0.205
C,I-131    ,NO ,    2.835E-01,   3.322E+00,   5.614E+00,,     0.051
C,BA-133   ,NO ,   -1.722E+00,   3.965E+00,   5.624E+00,,    -0.306
C,CS-134   ,NO ,    1.737E+00,   2.903E+00,   4.468E+00,,     0.389
C,CS-136   ,NO ,   -1.219E+00,   2.807E+00,   4.490E+00,,    -0.271
C,CS-137   ,NO ,    8.150E-01,   2.701E+00,   4.524E+00,,     0.180
C,CE-139   ,NO ,    1.110E+00,   2.368E+00,   3.956E+00,,     0.281
C,BA-140   ,NO ,   -6.404E+00,   1.041E+01,   1.599E+01,,    -0.401
C,LA-140   ,NO ,    6.395E-01,   3.457E+00,   5.978E+00,,     0.107
C,CE-141   ,NO ,    8.376E-02,   4.373E+00,   7.171E+00,,     0.012
C,CE-144   ,NO ,   -1.237E+01,   1.856E+01,   2.947E+01,,    -0.420
C,EU-152   ,NO ,    1.241E+00,   8.223E+00,   1.399E+01,,     0.089
C,EU-154   ,NO ,   -4.136E-01,   4.659E+00,   7.649E+00,,    -0.054
C,RA-226   ,NO ,   -8.241E-01,   6.733E+01,   1.115E+02,,    -0.007
C,AC-228   ,NO ,   -1.352E+01,   1.066E+01,   1.613E+01,,    -0.838
C,TH-232   ,NO ,   -1.351E+01,   1.065E+01,   1.611E+01,,    -0.838
C,U-235    ,NO ,    1.444E+00,   2.075E+01,   3.054E+01,,     0.047
C,U-238    ,NO ,   -2.532E+01,   2.768E+02,   4.546E+02,,    -0.056
C,AM-241   ,NO ,   -1.886E+01,   2.387E+01,   3.881E+01,,    -0.486
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 15:00:14.00
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 14-AUG-2006 13:45:04.91

LIMS No., Customer Name, Client ID: L29576-1 WG EX/DRES

Sample ID : 07L29576-1
Sample Type : WG
Quantity : 2.86930E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 11-AUG-2006 09:00:00.
Geometry : 073L082504
BKGFILE : 07BG072806MT
Real Time : 0 01:15:02.30
Live time : 0 01:15:01.31

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	295.08*	109	81	1.50	591.69	1.81E+00	2.43E-02	18.8	2.79E+00
2	1	351.96*	149	100	1.36	705.58	1.61E+00	3.30E-02	17.7	2.67E+00
3	1	583.29*	19	19	1.97	1168.68	1.12E+00	4.14E-03	57.6	8.18E-01
4	1	595.82	35	15	2.09	1193.77	1.10E+00	7.87E-03	25.7	8.87E+00
5	1	609.21*	160	48	1.49	1220.58	1.09E+00	3.54E-02	12.3	3.70E+00
6	1	769.56	10	31	2.22	1541.50	9.19E-01	2.28E-03	124.4	2.85E+00
7	1	910.97*	14	9	2.48	1824.47	8.14E-01	3.00E-03	57.1	1.14E+00
8	1	1120.17*	29	15	1.60	2243.04	7.03E-01	6.34E-03	32.7	5.16E-01
9	1	1259.93	14	7	1.61	2522.61	6.47E-01	3.08E-03	44.4	3.52E-01
10	1	1376.99*	33	10	6.83	2756.72	6.07E-01	7.29E-03	24.9	1.37E+00
11	1	1765.17*	24	7	2.14	3532.90	5.12E-01	5.27E-03	33.2	6.64E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
AC-228	835.50	------	1.75	8.662E-01	------	Line Not Found	------
	911.07	14	27.70*	8.145E-01	1.254E+01	1.255E+01	114.20
TH-232	583.14	19	30.25	1.120E+00	1.151E+01	1.151E+01	115.20
	911.07	14	27.70*	8.145E-01	1.254E+01	1.254E+01	114.20
	969.11	------	16.60	7.793E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29576-1 Acquisition date : 14-AUG-2006 13:45:04

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AC-228	5.75Y	1.00	1.254E+01	1.255E+01	1.434E+01	114.20	
TH-232	1.41E+10Y	1.00	1.254E+01	1.254E+01	1.432E+01	114.20	
	Total Activity :		2.508E+01	2.509E+01			
	Grand Total Activity :		2.508E+01	2.509E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L29576-1

Acquisition date : 14-AUG-2006 13:45:04

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	295.08	109	81	1.50	591.69	588	10	2.43E-02	37.5	1.81E+00	
1	351.96	149	100	1.36	705.58	700	14	3.30E-02	35.4	1.61E+00	
1	595.82	35	15	2.09	1193.77	1190	8	7.87E-03	51.4	1.10E+00	
1	609.21	160	48	1.49	1220.58	1214	13	3.54E-02	24.6	1.09E+00	
1	769.56	10	31	2.22	1541.50	1532	14	2.28E-03	****	9.19E-01	
1	1120.17	29	15	1.60	2243.04	2238	9	6.34E-03	65.4	7.03E-01	
1	1259.93	14	7	1.61	2522.61	2516	10	3.08E-03	88.8	6.47E-01	
1	1376.99	33	10	6.83	2756.72	2748	14	7.29E-03	49.8	6.07E-01	
1	1765.17	24	7	2.14	3532.90	3525	13	5.27E-03	66.5	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-232	1.41E+10Y	1.00	1.198E+01	1.198E+01	0.973E+01	81.18	
	Total Activity :		1.198E+01	1.198E+01			
	Grand Total Activity :		1.198E+01	1.198E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-232	1.198E+01	9.728E+00	2.056E+01	0.000E+00	0.583

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	1.315E+01	2.579E+01	4.588E+01	0.000E+00	0.287
NA-24	1.005E+01	1.536E+02	2.192E+02	0.000E+00	0.046
K-40	-2.289E+01	5.117E+01	1.008E+02	0.000E+00	-0.227
CR-51	3.107E+00	3.139E+01	5.167E+01	0.000E+00	0.060
MN-54	-4.422E-01	3.519E+00	5.603E+00	0.000E+00	-0.079
CO-57	-1.405E+00	3.412E+00	5.266E+00	0.000E+00	-0.267
CO-58	6.647E-01	3.610E+00	6.020E+00	0.000E+00	0.110
FE-59	7.497E-01	6.626E+00	1.122E+01	0.000E+00	0.067
CO-60	-3.851E-01	3.253E+00	5.198E+00	0.000E+00	-0.074
ZN-65	-1.889E+00	8.249E+00	1.115E+01	0.000E+00	-0.169
SE-75	2.235E-02	4.723E+00	7.792E+00	0.000E+00	0.003
SR-85	-7.707E+00	4.662E+00	6.843E+00	0.000E+00	-1.126
Y-88	-7.329E-01	3.158E+00	4.911E+00	0.000E+00	-0.149
NB-94	1.694E+00	3.477E+00	6.043E+00	0.000E+00	0.280
NB-95	1.729E+00	4.381E+00	6.616E+00	0.000E+00	0.261
ZR-95	-1.950E+00	6.168E+00	9.619E+00	0.000E+00	-0.203
MO-99	-7.428E+00	5.486E+01	8.799E+01	0.000E+00	-0.084
RU-103	-2.195E-01	3.415E+00	5.697E+00	0.000E+00	-0.039
RU-106	-2.799E+01	3.179E+01	4.661E+01	0.000E+00	-0.600
AG-110m	-1.196E+00	3.341E+00	5.252E+00	0.000E+00	-0.228
SN-113	-2.265E+00	4.739E+00	7.265E+00	0.000E+00	-0.312
SB-124	-2.354E+00	3.998E+00	5.177E+00	0.000E+00	-0.455
SB-125	-1.460E+01	1.063E+01	1.435E+01	0.000E+00	-1.017
TE-129M	-5.072E+00	3.817E+01	5.986E+01	0.000E+00	-0.085
I-131	2.174E+00	4.427E+00	7.527E+00	0.000E+00	0.289
BA-133	2.421E+00	4.885E+00	7.429E+00	0.000E+00	0.326
CS-134	-4.017E-01	3.653E+00	5.159E+00	0.000E+00	-0.078
CS-136	1.475E+00	4.183E+00	7.126E+00	0.000E+00	0.207
CS-137	3.315E+00	3.690E+00	6.752E+00	0.000E+00	0.491
CE-139	-2.591E+00	3.346E+00	5.376E+00	0.000E+00	-0.482
BA-140	-8.089E+00	1.187E+01	1.796E+01	0.000E+00	-0.450
LA-140	-1.394E+00	4.418E+00	6.595E+00	0.000E+00	-0.211
CE-141	-1.697E-01	6.021E+00	1.020E+01	0.000E+00	-0.017
CE-144	-2.113E+01	2.843E+01	4.274E+01	0.000E+00	-0.494
EU-152	1.509E+00	1.129E+01	1.857E+01	0.000E+00	0.081
EU-154	-6.880E+00	7.179E+00	1.060E+01	0.000E+00	-0.649
RA-226	7.164E-01	8.601E+01	1.523E+02	0.000E+00	0.005
AC-228	1.255E+01	1.434E+01	2.725E+01	0.000E+00	0.461
TH-228	-4.886E+00	7.827E+00	1.309E+01	0.000E+00	-0.373
U-235	-8.375E+00	2.886E+01	4.505E+01	0.000E+00	-0.186
U-238	-2.042E+02	3.627E+02	5.576E+02	0.000E+00	-0.366
AM-241	-1.544E+01	3.039E+01	4.791E+01	0.000E+00	-0.322

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A,07L29576-1       ,08/14/2006 15:00,08/11/2006 09:00,   2.869E+00,L29576-1 WG EX
B,07L29576-1       ,LIBD                ,08/14/2006 09:44,073L082504
C,TH-232   ,YES,    1.198E+01,    9.728E+00,    2.056E+01,,     0.583
C,BE-7     ,NO ,    1.315E+01,    2.579E+01,    4.588E+01,,     0.287
C,NA-24    ,NO ,    1.005E+01,    1.536E+02,    2.192E+02,,     0.046
C,K-40     ,NO ,   -2.289E+01,    5.117E+01,    1.008E+02,,    -0.227
C,CR-51    ,NO ,    3.107E+00,    3.139E+01,    5.167E+01,,     0.060
C,MN-54    ,NO ,   -4.422E-01,    3.519E+00,    5.603E+00,,    -0.079
C,CO-57    ,NO ,   -1.405E+00,    3.412E+00,    5.266E+00,,    -0.267
C,CO-58    ,NO ,    6.647E-01,    3.610E+00,    6.020E+00,,     0.110
C,FE-59    ,NO ,    7.497E-01,    6.626E+00,    1.122E+01,,     0.067
C,CO-60    ,NO ,   -3.851E-01,    3.253E+00,    5.198E+00,,    -0.074
C,ZN-65    ,NO ,   -1.889E+00,    8.249E+00,    1.115E+01,,    -0.169
C,SE-75    ,NO ,    2.235E-02,    4.723E+00,    7.792E+00,,     0.003
C,SR-85    ,NO ,   -7.707E+00,    4.662E+00,    6.843E+00,,    -1.126
C,Y-88     ,NO ,   -7.329E-01,    3.158E+00,    4.911E+00,,    -0.149
C,NB-94    ,NO ,    1.694E+00,    3.477E+00,    6.043E+00,,     0.280
C,NB-95    ,NO ,    1.729E+00,    4.381E+00,    6.616E+00,,     0.261
C,ZR-95    ,NO ,   -1.950E+00,    6.168E+00,    9.619E+00,,    -0.203
C,MO-99    ,NO ,   -7.428E+00,    5.486E+01,    8.799E+01,,    -0.084
C,RU-103   ,NO ,   -2.195E-01,    3.415E+00,    5.697E+00,,    -0.039
C,RU-106   ,NO ,   -2.799E+01,    3.179E+01,    4.661E+01,,    -0.600
C,AG-110m  ,NO ,   -1.196E+00,    3.341E+00,    5.252E+00,,    -0.228
C,SN-113   ,NO ,   -2.265E+00,    4.739E+00,    7.265E+00,,    -0.312
C,SB-124   ,NO ,   -2.354E+00,    3.998E+00,    5.177E+00,,    -0.455
C,SB-125   ,NO ,   -1.460E+01,    1.063E+01,    1.435E+01,,    -1.017
C,TE-129M  ,NO ,   -5.072E+00,    3.817E+01,    5.986E+01,,    -0.085
C,I-131    ,NO ,    2.174E+00,    4.427E+00,    7.527E+00,,     0.289
C,BA-133   ,NO ,    2.421E+00,    4.885E+00,    7.429E+00,,     0.326
C,CS-134   ,NO ,   -4.017E-01,    3.653E+00,    5.159E+00,,    -0.078
C,CS-136   ,NO ,    1.475E+00,    4.183E+00,    7.126E+00,,     0.207
C,CS-137   ,NO ,    3.315E+00,    3.690E+00,    6.752E+00,,     0.491
C,CE-139   ,NO ,   -2.591E+00,    3.346E+00,    5.376E+00,,    -0.482
C,BA-140   ,NO ,   -8.089E+00,    1.187E+01,    1.796E+01,,    -0.450
C,LA-140   ,NO ,   -1.394E+00,    4.418E+00,    6.595E+00,,    -0.211
C,CE-141   ,NO ,   -1.697E-01,    6.021E+00,    1.020E+01,,    -0.017
C,CE-144   ,NO ,   -2.113E+01,    2.843E+01,    4.274E+01,,    -0.494
C,EU-152   ,NO ,    1.509E+00,    1.129E+01,    1.857E+01,,     0.081
C,EU-154   ,NO ,   -6.880E+00,    7.179E+00,    1.060E+01,,    -0.649
C,RA-226   ,NO ,    7.164E-01,    8.601E+01,    1.523E+02,,     0.005
C,AC-228   ,NO ,    1.255E+01,    1.434E+01,    2.725E+01,,     0.461
C,TH-228   ,NO ,   -4.886E+00,    7.827E+00,    1.309E+01,,    -0.373
C,U-235    ,NO ,   -8.375E+00,    2.886E+01,    4.505E+01,,    -0.186
C,U-238    ,NO ,   -2.042E+02,    3.627E+02,    5.576E+02,,    -0.366
C,AM-241   ,NO ,   -1.544E+01,    3.039E+01,    4.791E+01,,    -0.322
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Sec. Review: PD Analyst: DH LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 15:59:59.05
TBE23 03017322 HpGe ********** Aquisition Date/Time: 14-AUG-2006 14:21:18.76

LIMS No., Customer Name, Client ID: L29576-2 WG EX/DRES

Sample ID : 23L29576-2
Sample Type : WG
Quantity : 3.13700E+00 L
Start Channel : 50 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 11-AUG-2006 09:10:00.
Geometry : 233L082404
BKGFILE : 23BG072806MT
Real Time : 0 01:36:04.63
Live time : 0 01:36:00.83

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	5	33.70*	26	10	1.09	67.70	8.12E-02	4.43E-03	53.7	2.55E+00
2	5	37.11*	40	68	1.60	74.50	1.40E-01	7.00E-03	49.0	
3	0	139.01	51	185	0.97	278.08	2.32E+00	8.93E-03	47.6	
4	0	351.88*	30	77	0.97	703.46	1.43E+00	5.16E-03	61.0	
5	0	596.10	51	40	0.64	1191.72	9.56E-01	8.91E-03	28.8	
6	0	610.12*	11	64	1.80	1219.75	9.39E-01	1.90E-03	156.0	
7	0	1120.12*	13	21	1.08	2240.22	6.16E-01	2.29E-03	82.9	
8	0	1460.71*	8	0	1.64	2922.32	5.10E-01	1.46E-03	100.7	
9	0	1764.28*	8	11	0.55	3530.71	4.38E-01	1.40E-03	109.4	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	8	10.67*	5.096E-01	2.310E+01	2.310E+01	201.42

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L29576-2 Acquisition date : 14-AUG-2006 14:21:18

Total number of lines in spectrum	9	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	1	11.11%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.310E+01	2.310E+01	4.652E+01	201.42	
	Total Activity :		2.310E+01	2.310E+01			
	Grand Total Activity :		2.310E+01	2.310E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L29576-2 Acquisition date : 14-AUG-2006 14:21:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	33.70	26	10	1.09	67.70	64	24	4.43E-03	****	8.12E-02	
5	37.11	40	68	1.60	74.50	64	24	7.00E-03	98.0	1.40E-01	
0	139.01	51	185	0.97	278.08	276	8	8.93E-03	95.2	2.32E+00	
0	351.88	30	77	0.97	703.46	698	10	5.16E-03	****	1.43E+00	
0	596.10	51	40	0.64	1191.72	1186	13	8.91E-03	57.5	9.56E-01	
0	610.12	11	64	1.80	1219.75	1213	12	1.90E-03	****	9.39E-01	
0	1120.12	13	21	1.08	2240.22	2235	14	2.29E-03	****	6.16E-01	
0	1764.28	8	11	0.55	3530.71	3521	16	1.40E-03	****	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	1	11.11%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.310E+01	2.310E+01	4.652E+01	201.42	
	Total Activity :		2.310E+01	2.310E+01			
	Grand Total Activity :		2.310E+01	2.310E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.310E+01	4.652E+01	5.628E+01	0.000E+00	0.410

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-6.795E+00		2.530E+01	4.471E+01	0.000E+00	-0.152
NA-24	-4.325E+01		1.005E+02	1.800E+02	0.000E+00	-0.240
CR-51	-1.458E+01		2.825E+01	4.618E+01	0.000E+00	-0.316

MN-54	6.893E-01	2.645E+00	5.023E+00	0.000E+00	0.137
CO-57	-1.708E+00	3.066E+00	5.127E+00	0.000E+00	-0.333
CO-58	-3.671E-01	2.562E+00	4.629E+00	0.000E+00	-0.079
FE-59	-1.768E+00	5.786E+00	1.000E+01	0.000E+00	-0.177
CO-60	1.444E+00	2.884E+00	5.958E+00	0.000E+00	0.242
ZN-65	-2.012E+00	7.009E+00	1.026E+01	0.000E+00	-0.196
SE-75	1.203E+00	4.267E+00	7.414E+00	0.000E+00	0.162
SR-85	-4.369E+00	3.910E+00	6.368E+00	0.000E+00	-0.686
Y-88	-7.082E-01	3.158E+00	5.860E+00	0.000E+00	-0.121
NB-94	-2.884E+00	2.822E+00	4.475E+00	0.000E+00	-0.644
NB-95	1.536E+00	3.198E+00	6.060E+00	0.000E+00	0.253
ZR-95	-3.733E-01	5.227E+00	9.413E+00	0.000E+00	-0.040
MO-99	2.529E+01	4.967E+01	9.546E+01	0.000E+00	0.265
RU-103	-2.778E+00	3.006E+00	4.954E+00	0.000E+00	-0.561
RU-106	2.084E+01	3.048E+01	5.837E+01	0.000E+00	0.357
AG-110m	1.518E+00	2.728E+00	5.295E+00	0.000E+00	0.287
SN-113	-5.815E-01	4.175E+00	7.430E+00	0.000E+00	-0.078
SB-124	-2.716E+00	4.953E+00	5.317E+00	0.000E+00	-0.511
SB-125	2.646E+00	8.240E+00	1.535E+01	0.000E+00	0.172
TE-129M	-4.842E+00	3.502E+01	6.262E+01	0.000E+00	-0.077
I-131	2.978E-01	4.171E+00	7.170E+00	0.000E+00	0.042
BA-133	1.602E+00	4.765E+00	7.391E+00	0.000E+00	0.217
CS-134	-7.629E-01	3.487E+00	5.272E+00	0.000E+00	-0.145
CS-136	1.200E+00	3.346E+00	6.363E+00	0.000E+00	0.189
CS-137	-2.554E-01	2.754E+00	5.012E+00	0.000E+00	-0.051
CE-139	-2.329E+00	3.207E+00	5.270E+00	0.000E+00	-0.442
BA-140	-2.290E+00	1.122E+01	2.006E+01	0.000E+00	-0.114
LA-140	-1.095E+00	3.421E+00	6.268E+00	0.000E+00	-0.175
CE-141	-1.131E+00	6.073E+00	9.930E+00	0.000E+00	-0.114
CE-144	3.078E+01	2.402E+01	4.363E+01	0.000E+00	0.706
EU-152	-5.251E-01	1.019E+01	1.726E+01	0.000E+00	-0.030
EU-154	7.306E-01	6.279E+00	1.086E+01	0.000E+00	0.067
RA-226	-3.013E+01	8.230E+01	1.455E+02	0.000E+00	-0.207
AC-228	1.010E+01	1.126E+01	2.355E+01	0.000E+00	0.429
TH-228	-1.166E-01	6.227E+00	1.081E+01	0.000E+00	-0.011
TH-232	1.009E+01	1.125E+01	2.353E+01	0.000E+00	0.429
U-235	3.773E+01	2.713E+01	4.485E+01	0.000E+00	0.841
U-238	1.800E+02	2.982E+02	6.209E+02	0.000E+00	0.290
AM-241	-1.326E+01	1.739E+01	2.927E+01	0.000E+00	-0.453

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A,23L29576-2       ,08/14/2006 16:00,08/11/2006 09:10,   3.137E+00,L29576-2 WG EX
B,23L29576-2       ,LIBD                ,08/14/2006 10:01,233L082404
C,K-40     ,YES,    2.310E+01,   4.652E+01,   5.628E+01,,    0.410
C,BE-7     ,NO ,   -6.795E+00,   2.530E+01,   4.471E+01,,   -0.152
C,NA-24    ,NO ,   -4.325E+01,   1.005E+02,   1.800E+02,,   -0.240
C,CR-51    ,NO ,   -1.458E+01,   2.825E+01,   4.618E+01,,   -0.316
C,MN-54    ,NO ,    6.893E-01,   2.645E+00,   5.023E+00,,    0.137
C,CO-57    ,NO ,   -1.708E+00,   3.066E+00,   5.127E+00,,   -0.333
C,CO-58    ,NO ,   -3.671E-01,   2.562E+00,   4.629E+00,,   -0.079
C,FE-59    ,NO ,   -1.768E+00,   5.786E+00,   1.000E+01,,   -0.177
C,CO-60    ,NO ,    1.444E+00,   2.884E+00,   5.958E+00,,    0.242
C,ZN-65    ,NO ,   -2.012E+00,   7.009E+00,   1.026E+01,,   -0.196
C,SE-75    ,NO ,    1.203E+00,   4.267E+00,   7.414E+00,,    0.162
C,SR-85    ,NO ,   -4.369E+00,   3.910E+00,   6.368E+00,,   -0.686
C,Y-88     ,NO ,   -7.082E-01,   3.158E+00,   5.860E+00,,   -0.121
C,NB-94    ,NO ,   -2.884E+00,   2.822E+00,   4.475E+00,,   -0.644
C,NB-95    ,NO ,    1.536E+00,   3.198E+00,   6.060E+00,,    0.253
C,ZR-95    ,NO ,   -3.733E-01,   5.227E+00,   9.413E+00,,   -0.040
C,MO-99    ,NO ,    2.529E+01,   4.967E+01,   9.546E+01,,    0.265
C,RU-103   ,NO ,   -2.778E+00,   3.006E+00,   4.954E+00,,   -0.561
C,RU-106   ,NO ,    2.084E+01,   3.048E+01,   5.837E+01,,    0.357
C,AG-110m  ,NO ,    1.518E+00,   2.728E+00,   5.295E+00,,    0.287
C,SN-113   ,NO ,   -5.815E-01,   4.175E+00,   7.430E+00,,   -0.078
C,SB-124   ,NO ,   -2.716E+00,   4.953E+00,   5.317E+00,,   -0.511
C,SB-125   ,NO ,    2.646E+00,   8.240E+00,   1.535E+01,,    0.172
C,TE-129M  ,NO ,   -4.842E+00,   3.502E+01,   6.262E+01,,   -0.077
C,I-131    ,NO ,    2.978E-01,   4.171E+00,   7.170E+00,,    0.042
C,BA-133   ,NO ,    1.602E+00,   4.765E+00,   7.391E+00,,    0.217
C,CS-134   ,NO ,   -7.629E-01,   3.487E+00,   5.272E+00,,   -0.145
C,CS-136   ,NO ,    1.200E+00,   3.346E+00,   6.363E+00,,    0.189
C,CS-137   ,NO ,   -2.554E-01,   2.754E+00,   5.012E+00,,   -0.051
C,CE-139   ,NO ,   -2.329E+00,   3.207E+00,   5.270E+00,,   -0.442
C,BA-140   ,NO ,   -2.290E+00,   1.122E+01,   2.006E+01,,   -0.114
C,LA-140   ,NO ,   -1.095E+00,   3.421E+00,   6.268E+00,,   -0.175
C,CE-141   ,NO ,   -1.131E+00,   6.073E+00,   9.930E+00,,   -0.114
C,CE-144   ,NO ,    3.078E+01,   2.402E+01,   4.363E+01,,    0.706
C,EU-152   ,NO ,   -5.251E-01,   1.019E+01,   1.726E+01,,   -0.030
C,EU-154   ,NO ,    7.306E-01,   6.279E+00,   1.086E+01,,    0.067
C,RA-226   ,NO ,   -3.013E+01,   8.230E+01,   1.455E+02,,   -0.207
C,AC-228   ,NO ,    1.010E+01,   1.126E+01,   2.355E+01,,    0.429
C,TH-228   ,NO ,   -1.166E-01,   6.227E+00,   1.081E+01,,   -0.011
C,TH-232   ,NO ,    1.009E+01,   1.125E+01,   2.353E+01,,    0.429
C,U-235    ,NO ,    3.773E+01,   2.713E+01,   4.485E+01,,    0.841
C,U-238    ,NO ,    1.800E+02,   2.982E+02,   6.209E+02,,    0.290
C,AM-241   ,NO ,   -1.326E+01,   1.739E+01,   2.927E+01,,   -0.453
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Sec. Review: KD Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 15:28:27.08
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 14-AUG-2006 14:21:21.15

LIMS No., Customer Name, Client ID: L29576-3 WG EX/DRES

Sample ID : 04L29576-3
Sample Type : WG
Quantity : 3.08110E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 11-AUG-2006 11:30:00.
Geometry : 043L082004
BKGFILE : 04BG072806MT
Real Time : 0 01:07:01.81
Live time : 0 01:07:00.98

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	77.19*	55	82	1.10	155.30	1.06E+00	1.38E-02	30.8	5.47E+00
2	1	87.18*	28	106	1.18	175.30	1.39E+00	7.00E-03	65.1	2.39E+00
3	1	241.93	64	81	0.96	484.84	1.66E+00	1.60E-02	27.1	4.16E-01
4	1	295.21*	116	47	1.55	591.42	1.45E+00	2.89E-02	16.0	2.38E+00
5	1	351.85*	199	33	1.34	704.72	1.28E+00	4.95E-02	9.6	2.81E+00
6	1	595.07	27	18	2.93	1191.16	8.64E-01	6.63E-03	36.6	1.45E+00
7	1	609.11*	155	24	1.34	1219.22	8.49E-01	3.85E-02	10.7	1.26E+00
8	1	768.06	14	6	1.72	1537.09	7.10E-01	3.52E-03	38.7	9.38E-01
9	1	933.79	19	17	2.74	1868.49	6.09E-01	4.71E-03	50.7	7.20E-01
10	1	1119.94*	28	6	1.89	2240.68	5.27E-01	6.85E-03	26.8	1.63E+00
11	1	1237.67*	27	2	2.48	2476.03	4.88E-01	6.64E-03	22.5	2.94E-01
12	1	1763.82*	39	0	3.40	3527.74	3.77E-01	9.64E-03	16.9	1.10E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L29576-3

Acquisition date : 14-AUG-2006 14:21:21

Total number of lines in spectrum	12	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	1	8.33%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L29576-3

Acquisition date : 14-AUG-2006 14:21:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	77.19	55	82	1.10	155.30	153	6	1.38E-02	61.7	1.06E+00	
1	87.18	28	106	1.18	175.30	173	7	7.00E-03	****	1.39E+00	
1	241.93	64	81	0.96	484.84	481	8	1.60E-02	54.2	1.66E+00	T
1	295.21	116	47	1.55	591.42	587	12	2.89E-02	32.0	1.45E+00	
1	351.85	199	33	1.34	704.72	698	11	4.95E-02	19.1	1.28E+00	
1	595.07	27	18	2.93	1191.16	1184	12	6.63E-03	73.1	8.64E-01	
1	609.11	155	24	1.34	1219.22	1214	12	3.85E-02	21.5	8.49E-01	
1	768.06	14	6	1.72	1537.09	1534	8	3.52E-03	77.4	7.10E-01	
1	933.79	19	17	2.74	1868.49	1863	14	4.71E-03	****	6.09E-01	
1	1119.94	28	6	1.89	2240.68	2234	10	6.85E-03	53.5	5.27E-01	
1	1237.67	27	2	2.48	2476.03	2470	11	6.64E-03	44.9	4.88E-01	
1	1763.82	39	0	3.40	3527.74	3520	14	9.64E-03	33.7	3.77E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 12
Number of unidentified lines 11
Number of lines tentatively identified by NID 1 8.33%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.658E+00		3.731E+01	6.118E+01	0.000E+00	-0.043
NA-24	6.362E+01		1.122E+02	2.105E+02	0.000E+00	0.302
K-40	5.395E+00		5.638E+01	1.149E+02	0.000E+00	0.047
CR-51	-3.268E+01		3.299E+01	5.031E+01	0.000E+00	-0.650
MN-54	-1.413E+00		3.312E+00	5.127E+00	0.000E+00	-0.276
CO-57	1.196E+00		3.540E+00	5.984E+00	0.000E+00	0.200
CO-58	-2.140E+00		4.151E+00	5.974E+00	0.000E+00	-0.358
FE-59	2.190E+00		8.320E+00	1.437E+01	0.000E+00	0.152
CO-60	-2.908E-01		4.630E+00	8.339E+00	0.000E+00	-0.035
ZN-65	-3.468E+00		1.028E+01	1.333E+01	0.000E+00	-0.260
SE-75	-1.177E+00		5.063E+00	7.847E+00	0.000E+00	-0.150
SR-85	-1.525E+01		5.372E+00	6.276E+00	0.000E+00	-2.430
Y-88	-4.714E-01		3.958E+00	6.333E+00	0.000E+00	-0.074
NB-94	3.926E+00		3.556E+00	6.745E+00	0.000E+00	0.582
NB-95	3.013E+00		3.707E+00	6.327E+00	0.000E+00	0.476
ZR-95	-6.605E+00		6.475E+00	8.074E+00	0.000E+00	-0.818

MO-99	1.289E+01	5.424E+01	9.131E+01	0.000E+00	0.141
RU-103	-1.960E+00	3.681E+00	5.598E+00	0.000E+00	-0.350
RU-106	-1.501E+01	3.363E+01	5.043E+01	0.000E+00	-0.298
AG-110m	-4.086E+00	3.709E+00	4.778E+00	0.000E+00	-0.855
SN-113	1.539E+00	4.912E+00	8.494E+00	0.000E+00	0.181
SB-124	1.664E+00	3.783E+00	6.173E+00	0.000E+00	0.270
SB-125	-2.563E+00	1.069E+01	1.727E+01	0.000E+00	-0.148
TE-129M	1.437E+01	4.401E+01	7.588E+01	0.000E+00	0.189
I-131	-3.768E-01	4.920E+00	8.195E+00	0.000E+00	-0.046
BA-133	1.321E+00	5.236E+00	8.070E+00	0.000E+00	0.164
CS-134	-1.622E+00	3.764E+00	4.798E+00	0.000E+00	-0.338
CS-136	-1.524E+00	4.209E+00	6.661E+00	0.000E+00	-0.229
CS-137	4.731E-01	4.639E+00	7.620E+00	0.000E+00	0.062
CE-139	7.734E-01	3.801E+00	6.284E+00	0.000E+00	0.123
BA-140	-2.730E+00	1.632E+01	2.615E+01	0.000E+00	-0.104
LA-140	-7.738E-02	5.906E+00	9.884E+00	0.000E+00	-0.008
CE-141	-2.290E+00	6.626E+00	1.058E+01	0.000E+00	-0.216
CE-144	1.444E+01	2.724E+01	4.650E+01	0.000E+00	0.310
EU-152	4.007E+00	1.194E+01	2.075E+01	0.000E+00	0.193
EU-154	1.414E+00	7.536E+00	1.260E+01	0.000E+00	0.112
RA-226	1.075E+01	9.236E+01	1.571E+02	0.000E+00	0.068
AC-228	-7.497E-01	1.442E+01	2.606E+01	0.000E+00	-0.029
TH-228	-4.491E+00	8.512E+00	1.256E+01	0.000E+00	-0.358
TH-232	-7.489E-01	1.440E+01	2.603E+01	0.000E+00	-0.029
U-235	1.149E+01	2.765E+01	4.671E+01	0.000E+00	0.246
U-238	2.305E+02	4.637E+02	8.333E+02	0.000E+00	0.277
AM-241	-1.122E+01	3.729E+01	6.182E+01	0.000E+00	-0.181

A,04L29576-3 ,08/14/2006 15:28,08/11/2006 11:30, 3.081E+00,L29576-3 WG EX
B,04L29576-3 ,LIBD ,08/14/2006 09:43,043L082004

C,BE-7	,NO ,	-2.658E+00,	3.731E+01,	6.118E+01,,	-0.043
C,NA-24	,NO ,	6.362E+01,	1.122E+02,	2.105E+02,,	0.302
C,K-40	,NO ,	5.395E+00,	5.638E+01,	1.149E+02,,	0.047
C,CR-51	,NO ,	-3.268E+01,	3.299E+01,	5.031E+01,,	-0.650
C,MN-54	,NO ,	-1.413E+00,	3.312E+00,	5.127E+00,,	-0.276
C,CO-57	,NO ,	1.196E+00,	3.540E+00,	5.984E+00,,	0.200
C,CO-58	,NO ,	-2.140E+00,	4.151E+00,	5.974E+00,,	-0.358
C,FE-59	,NO ,	2.190E+00,	8.320E+00,	1.437E+01,,	0.152
C,CO-60	,NO ,	-2.908E-01,	4.630E+00,	8.339E+00,,	-0.035
C,ZN-65	,NO ,	-3.468E+00,	1.028E+01,	1.333E+01,,	-0.260
C,SE-75	,NO ,	-1.177E+00,	5.063E+00,	7.847E+00,,	-0.150
C,SR-85	,NO ,	-1.525E+01,	5.372E+00,	6.276E+00,,	-2.430
C,Y-88	,NO ,	-4.714E-01,	3.958E+00,	6.333E+00,,	-0.074
C,NB-94	,NO ,	3.926E+00,	3.556E+00,	6.745E+00,,	0.582
C,NB-95	,NO ,	3.013E+00,	3.707E+00,	6.327E+00,,	0.476
C,ZR-95	,NO ,	-6.605E+00,	6.475E+00,	8.074E+00,,	-0.818
C,MO-99	,NO ,	1.289E+01,	5.424E+01,	9.131E+01,,	0.141
C,RU-103	,NO ,	-1.960E+00,	3.681E+00,	5.598E+00,,	-0.350
C,RU-106	,NO ,	-1.501E+01,	3.363E+01,	5.043E+01,,	-0.298
C,AG-110m	,NO ,	-4.086E+00,	3.709E+00,	4.778E+00,,	-0.855
C,SN-113	,NO ,	1.539E+00,	4.912E+00,	8.494E+00,,	0.181
C,SB-124	,NO ,	1.664E+00,	3.783E+00,	6.173E+00,,	0.270
C,SB-125	,NO ,	-2.563E+00,	1.069E+01,	1.727E+01,,	-0.148
C,TE-129M	,NO ,	1.437E+01,	4.401E+01,	7.588E+01,,	0.189
C,I-131	,NO ,	-3.768E-01,	4.920E+00,	8.195E+00,,	-0.046
C,BA-133	,NO ,	1.321E+00,	5.236E+00,	8.070E+00,,	0.164
C,CS-134	,NO ,	-1.622E+00,	3.764E+00,	4.798E+00,,	-0.338
C,CS-136	,NO ,	-1.524E+00,	4.209E+00,	6.661E+00,,	-0.229
C,CS-137	,NO ,	4.731E-01,	4.639E+00,	7.620E+00,,	0.062
C,CE-139	,NO ,	7.734E-01,	3.801E+00,	6.284E+00,,	0.123
C,BA-140	,NO ,	-2.730E+00,	1.632E+01,	2.615E+01,,	-0.104
C,LA-140	,NO ,	-7.738E-02,	5.906E+00,	9.884E+00,,	-0.008
C,CE-141	,NO ,	-2.290E+00,	6.626E+00,	1.058E+01,,	-0.216
C,CE-144	,NO ,	1.444E+01,	2.724E+01,	4.650E+01,,	0.310
C,EU-152	,NO ,	4.007E+00,	1.194E+01,	2.075E+01,,	0.193
C,EU-154	,NO ,	1.414E+00,	7.536E+00,	1.260E+01,,	0.112
C,RA-226	,NO ,	1.075E+01,	9.236E+01,	1.571E+02,,	0.068
C,AC-228	,NO ,	-7.497E-01,	1.442E+01,	2.606E+01,,	-0.029
C,TH-228	,NO ,	-4.491E+00,	8.512E+00,	1.256E+01,,	-0.358
C,TH-232	,NO ,	-7.489E-01,	1.440E+01,	2.603E+01,,	-0.029
C,U-235	,NO ,	1.149E+01,	2.765E+01,	4.671E+01,,	0.246
C,U-238	,NO ,	2.305E+02,	4.637E+02,	8.333E+02,,	0.277
C,AM-241	,NO ,	-1.122E+01,	3.729E+01,	6.182E+01,,	-0.181

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 18:09:27.81
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 14-AUG-2006 15:07:49.99

LIMS No., Customer Name, Client ID: L29576-4 WG EX/DRES

Sample ID : 07L29576-4
Sample Type : WG
Quantity : 2.86760E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 11-AUG-2006 13:15:00.
Geometry : 073L082504
BKGFILE : 07BG072806MT
Real Time : 0 03:01:34.53
Live time : 0 03:01:32.31

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	65.40*	155	689	4.00	131.73	7.69E-01	1.43E-02	41.0	3.38E+00
2	1	198.34*	82	359	1.89	397.97	2.25E+00	7.56E-03	48.7	2.51E+00
3	1	295.00*	61	203	1.40	591.53	1.81E+00	5.64E-03	48.5	1.51E+00
4	1	351.80*	140	202	1.39	705.25	1.61E+00	1.29E-02	23.7	2.33E+00
5	1	595.71	82	57	1.90	1193.55	1.10E+00	7.57E-03	20.9	1.13E+00
6	1	609.34*	148	112	1.26	1220.83	1.09E+00	1.36E-02	18.6	1.73E+00
7	1	846.17*	25	21	4.51	1694.80	8.58E-01	2.28E-03	49.3	3.20E+00
8	1	910.83*	22	25	2.87	1824.20	8.15E-01	2.02E-03	58.3	2.20E+00
9	1	1539.53	16	8	1.56	3081.77	5.62E-01	1.51E-03	48.0	5.52E-01
10	1	1543.69	17	5	2.30	3090.08	5.61E-01	1.57E-03	32.3	6.27E-01
11	1	1764.58*	27	19	2.48	3531.72	5.12E-01	2.50E-03	43.9	8.03E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
AC-228	835.50	------	1.75	8.662E-01	------	Line Not Found	------
	911.07	22	27.70*	8.146E-01	8.446E+00	8.455E+00	116.56

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L29576-4

Acquisition date : 14-AUG-2006 15:07:49

Total number of lines in spectrum	11	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	1	9.09%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AC-228	5.75Y	1.00	8.446E+00	8.455E+00	9.855E+00	116.56	
	Total Activity :		8.446E+00	8.455E+00			
	Grand Total Activity :		8.446E+00	8.455E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L29576-4

Acquisition date : 14-AUG-2006 15:07:49

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	65.40	155	689	4.00	131.73	122	18	1.43E-02	82.0	7.69E-01	
1	198.34	82	359	1.89	397.97	391	12	7.56E-03	97.5	2.25E+00	
1	295.00	61	203	1.40	591.53	587	11	5.64E-03	97.1	1.81E+00	
1	351.80	140	202	1.39	705.25	698	13	1.29E-02	47.3	1.61E+00	
1	595.71	82	57	1.90	1193.55	1188	11	7.57E-03	41.8	1.10E+00	
1	609.34	148	112	1.26	1220.83	1213	15	1.36E-02	37.1	1.09E+00	
1	846.17	25	21	4.51	1694.80	1688	12	2.28E-03	98.5	8.58E-01	
1	1539.53	16	8	1.56	3081.77	3075	13	1.51E-03	96.1	5.62E-01	
1	1543.69	17	5	2.30	3090.08	3087	10	1.57E-03	64.6	5.61E-01	
1	1764.58	27	19	2.48	3531.72	3523	15	2.50E-03	87.9	5.12E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	1	9.09%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AC-228	5.75Y	1.00	8.446E+00	8.455E+00	9.855E+00	116.56	
	Total Activity :		8.446E+00	8.455E+00			
	Grand Total Activity :		8.446E+00	8.455E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
AC-228	8.455E+00	9.855E+00	1.291E+01	0.000E+00	0.655

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.286E+00		1.742E+01	2.948E+01	0.000E+00	0.044

NA-24	6.494E+00		7.582E+01	1.253E+02	0.000E+00	0.052
K-40	-5.673E+00		3.435E+01	6.762E+01	0.000E+00	-0.084
CR-51	-7.650E+00		1.847E+01	2.936E+01	0.000E+00	-0.261
MN-54	-8.431E-01		2.158E+00	3.363E+00	0.000E+00	-0.251
CO-57	-8.771E-01		2.085E+00	3.250E+00	0.000E+00	-0.270
CO-58	-3.551E-01		2.286E+00	3.662E+00	0.000E+00	-0.097
FE-59	7.711E-01		4.078E+00	6.918E+00	0.000E+00	0.111
CO-60	4.230E-01		2.336E+00	3.911E+00	0.000E+00	0.108
ZN-65	-8.376E+00		4.986E+00	6.857E+00	0.000E+00	-1.221
SE-75	-1.659E-01		2.700E+00	4.439E+00	0.000E+00	-0.037
SR-85	-7.859E+00		2.885E+00	4.170E+00	0.000E+00	-1.885
Y-88	7.477E-01		2.256E+00	3.929E+00	0.000E+00	0.190
NB-94	3.527E-01		1.988E+00	3.316E+00	0.000E+00	0.106
NB-95	-5.787E-01		2.287E+00	3.649E+00	0.000E+00	-0.159
ZR-95	-8.702E-02		3.541E+00	5.770E+00	0.000E+00	-0.015
MO-99	2.082E+01		3.401E+01	5.879E+01	0.000E+00	0.354
RU-103	-3.305E-01		2.279E+00	3.792E+00	0.000E+00	-0.087
RU-106	-3.637E+00		1.973E+01	3.217E+01	0.000E+00	-0.113
AG-110m	-9.218E-01		1.927E+00	3.036E+00	0.000E+00	-0.304
SN-113	7.659E-01		2.861E+00	4.697E+00	0.000E+00	0.163
SB-124	2.103E+00		2.435E+00	3.669E+00	0.000E+00	0.573
SB-125	-1.819E+00		5.942E+00	9.295E+00	0.000E+00	-0.196
TE-129M	1.186E+01		2.590E+01	4.278E+01	0.000E+00	0.277
I-131	2.716E-01		2.587E+00	4.222E+00	0.000E+00	0.064
BA-133	2.426E+00		3.131E+00	4.764E+00	0.000E+00	0.509
CS-134	1.180E-01		2.389E+00	3.459E+00	0.000E+00	0.034
CS-136	6.088E-01		2.496E+00	4.151E+00	0.000E+00	0.147
CS-137	-2.146E+00		2.245E+00	3.379E+00	0.000E+00	-0.635
CE-139	-1.246E+00		1.990E+00	3.270E+00	0.000E+00	-0.381
BA-140	7.021E+00		8.474E+00	1.503E+01	0.000E+00	0.467
LA-140	5.145E-01		2.753E+00	4.571E+00	0.000E+00	0.113
CE-141	-1.189E+00		3.539E+00	5.926E+00	0.000E+00	-0.201
CE-144	-8.495E+00		1.643E+01	2.538E+01	0.000E+00	-0.335
EU-152	-4.217E+00		6.807E+00	1.020E+01	0.000E+00	-0.413
EU-154	1.977E-01		4.446E+00	7.089E+00	0.000E+00	0.028
RA-226	-1.034E+01		5.444E+01	9.379E+01	0.000E+00	-0.110
TH-228	-2.564E+00		4.323E+00	7.293E+00	0.000E+00	-0.352
TH-232	8.446E+00	+	9.844E+00	1.558E+01	0.000E+00	0.542
U-235	-1.852E+00		1.731E+01	2.706E+01	0.000E+00	-0.068
U-238	7.816E+01		2.335E+02	3.930E+02	0.000E+00	0.199
AM-241	1.264E+01		1.995E+01	3.041E+01	0.000E+00	0.416

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A,07L29576-4      ,08/14/2006 18:09,08/11/2006 13:15,   2.868E+00,L29576-4 WG EX
B,07L29576-4      ,LIBD                ,08/14/2006 09:44,073L082504
C,AC-228  ,YES,    8.455E+00,    9.855E+00,    1.291E+01,,     0.655
C,BE-7    ,NO ,    1.286E+00,    1.742E+01,    2.948E+01,,     0.044
C,NA-24   ,NO ,    6.494E+00,    7.582E+01,    1.253E+02,,     0.052
C,K-40    ,NO ,   -5.673E+00,    3.435E+01,    6.762E+01,,    -0.084
C,CR-51   ,NO ,   -7.650E+00,    1.847E+01,    2.936E+01,,    -0.261
C,MN-54   ,NO ,   -8.431E-01,    2.158E+00,    3.363E+00,,    -0.251
C,CO-57   ,NO ,   -8.771E-01,    2.085E+00,    3.250E+00,,    -0.270
C,CO-58   ,NO ,   -3.551E-01,    2.286E+00,    3.662E+00,,    -0.097
C,FE-59   ,NO ,    7.711E-01,    4.078E+00,    6.918E+00,,     0.111
C,CO-60   ,NO ,    4.230E-01,    2.336E+00,    3.911E+00,,     0.108
C,ZN-65   ,NO ,   -8.376E+00,    4.986E+00,    6.857E+00,,    -1.221
C,SE-75   ,NO ,   -1.659E-01,    2.700E+00,    4.439E+00,,    -0.037
C,SR-85   ,NO ,   -7.859E+00,    2.885E+00,    4.170E+00,,    -1.885
C,Y-88    ,NO ,    7.477E-01,    2.256E+00,    3.929E+00,,     0.190
C,NB-94   ,NO ,    3.527E-01,    1.988E+00,    3.316E+00,,     0.106
C,NB-95   ,NO ,   -5.787E-01,    2.287E+00,    3.649E+00,,    -0.159
C,ZR-95   ,NO ,   -8.702E-02,    3.541E+00,    5.770E+00,,    -0.015
C,MO-99   ,NO ,    2.082E+01,    3.401E+01,    5.879E+01,,     0.354
C,RU-103  ,NO ,   -3.305E-01,    2.279E+00,    3.792E+00,,    -0.087
C,RU-106  ,NO ,   -3.637E+00,    1.973E+01,    3.217E+01,,    -0.113
C,AG-110m ,NO ,   -9.218E-01,    1.927E+00,    3.036E+00,,    -0.304
C,SN-113  ,NO ,    7.659E-01,    2.861E+00,    4.697E+00,,     0.163
C,SB-124  ,NO ,    2.103E+00,    2.435E+00,    3.669E+00,,     0.573
C,SB-125  ,NO ,   -1.819E+00,    5.942E+00,    9.295E+00,,    -0.196
C,TE-129M ,NO ,    1.186E+01,    2.590E+01,    4.278E+01,,     0.277
C,I-131   ,NO ,    2.716E-01,    2.587E+00,    4.222E+00,,     0.064
C,BA-133  ,NO ,    2.426E+00,    3.131E+00,    4.764E+00,,     0.509
C,CS-134  ,NO ,    1.180E-01,    2.389E+00,    3.459E+00,,     0.034
C,CS-136  ,NO ,    6.088E-01,    2.496E+00,    4.151E+00,,     0.147
C,CS-137  ,NO ,   -2.146E+00,    2.245E+00,    3.379E+00,,    -0.635
C,CE-139  ,NO ,   -1.246E+00,    1.990E+00,    3.270E+00,,    -0.381
C,BA-140  ,NO ,    7.021E+00,    8.474E+00,    1.503E+01,,     0.467
C,LA-140  ,NO ,    5.145E-01,    2.753E+00,    4.571E+00,,     0.113
C,CE-141  ,NO ,   -1.189E+00,    3.539E+00,    5.926E+00,,    -0.201
C,CE-144  ,NO ,   -8.495E+00,    1.643E+01,    2.538E+01,,    -0.335
C,EU-152  ,NO ,   -4.217E+00,    6.807E+00,    1.020E+01,,    -0.413
C,EU-154  ,NO ,    1.977E-01,    4.446E+00,    7.089E+00,,     0.028
C,RA-226  ,NO ,   -1.034E+01,    5.444E+01,    9.379E+01,,    -0.110
C,TH-228  ,NO ,   -2.564E+00,    4.323E+00,    7.293E+00,,    -0.352
C,TH-232  ,NO ,    8.446E+00,    9.844E+00,    1.558E+01,,     0.542
C,U-235   ,NO ,   -1.852E+00,    1.731E+01,    2.706E+01,,    -0.068
C,U-238   ,NO ,    7.816E+01,    2.335E+02,    3.930E+02,,     0.199
C,AM-241  ,NO ,    1.264E+01,    1.995E+01,    3.041E+01,,     0.416
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 14-AUG-2006 18:13:27.89
TBE23 03017322 HpGe ********** Aquisition Date/Time: 14-AUG-2006 16:07:30.52

LIMS No., Customer Name, Client ID: L29576-5 WG EX/DRES

Sample ID	: 23L29576-5			Smple Date:	11-AUG-2006 13:40:00.
Sample Type	: WG			Geometry	: 233L082404
Quantity	: 3.08890E+00 L			BKGFILE	: 23BG072806MT
Start Channel	: 50	Energy Tol	: 1.00000	Real Time	: 0 02:05:42.84
End Channel	: 4090	Pk Srch Sens:	5.00000	Live time	: 0 02:05:37.80
MDA Constant	: 0.00	Library Used:	LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	4	35.19*	29	35	1.53	70.68	1.05E-01	3.88E-03	73.4	4.04E+00
2	4	36.84*	49	58	1.57	73.96	1.35E-01	6.43E-03	45.1	
3	4	38.87	68	88	1.54	78.03	1.79E-01	9.00E-03	31.4	
4	4	42.30*	62	179	1.77	84.88	2.67E-01	8.24E-03	39.8	
5	0	140.08*	30	395	1.42	280.20	2.32E+00	4.02E-03	133.7	
6	0	198.26	143	264	1.54	396.46	2.11E+00	1.90E-02	25.4	
7	0	294.84*	57	167	1.93	589.44	1.64E+00	7.50E-03	50.6	
8	0	352.16*	109	136	1.32	704.01	1.43E+00	1.45E-02	25.5	
9	0	510.89*	9	58	2.85	1021.34	1.07E+00	1.24E-03	257.6	
10	0	609.19*	122	37	1.67	1217.89	9.40E-01	1.62E-02	15.2	
11	0	1121.05*	35	32	2.03	2242.08	6.15E-01	4.58E-03	44.2	
12	0	1764.40*	18	5	1.38	3530.95	4.38E-01	2.43E-03	37.3	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L29576-5 Acquisition date : 14-AUG-2006 16:07:30

Total number of lines in spectrum	12	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines Page : 3
Sample ID : 23L29576-5 Acquisition date : 14-AUG-2006 16:07:30

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	35.19	29	35	1.53	70.68	65	26	3.88E-03	****	1.05E-01	
4	36.84	49	58	1.57	73.96	65	26	6.43E-03	90.2	1.35E-01	
4	38.87	68	88	1.54	78.03	65	26	9.00E-03	62.7	1.79E-01	
4	42.30	62	179	1.77	84.88	65	26	8.24E-03	79.6	2.67E-01	
0	140.08	30	395	1.42	280.20	273	12	4.02E-03	****	2.32E+00	
0	198.26	143	264	1.54	396.46	390	14	1.90E-02	50.8	2.11E+00	
0	294.84	57	167	1.93	589.44	585	14	7.50E-03	****	1.64E+00	
0	352.16	109	136	1.32	704.01	698	14	1.45E-02	50.9	1.43E+00	
0	510.89	9	58	2.85	1021.34	1013	20	1.24E-03	****	1.07E+00	
0	609.19	122	37	1.67	1217.89	1209	16	1.62E-02	30.3	9.40E-01	
0	1121.05	35	32	2.03	2242.08	2234	20	4.58E-03	88.5	6.15E-01	
0	1764.40	18	5	1.38	3530.95	3528	9	2.43E-03	74.6	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 12
Number of unidentified lines 12
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	4.984E+00		2.456E+01	4.444E+01	0.000E+00	0.112
NA-24	5.651E+01		8.972E+01	1.819E+02	0.000E+00	0.311
K-40	-1.468E+01		4.627E+01	1.007E+02	0.000E+00	-0.146
CR-51	1.083E+01		2.455E+01	4.286E+01	0.000E+00	0.253
MN-54	4.095E-01		2.526E+00	4.620E+00	0.000E+00	0.089
CO-57	-7.020E-01		2.897E+00	4.896E+00	0.000E+00	-0.143
CO-58	-4.681E-01		2.747E+00	4.815E+00	0.000E+00	-0.097
FE-59	-4.110E+00		5.728E+00	9.213E+00	0.000E+00	-0.446
CO-60	-5.874E-01		2.215E+00	4.077E+00	0.000E+00	-0.144
ZN-65	6.120E-01		5.471E+00	8.776E+00	0.000E+00	0.070
SE-75	-2.965E+00		3.828E+00	6.172E+00	0.000E+00	-0.480
SR-85	4.413E+00		2.808E+00	5.513E+00	0.000E+00	0.800
Y-88	-2.038E+00		2.762E+00	4.511E+00	0.000E+00	-0.452
NB-94	1.053E+00		2.418E+00	4.534E+00	0.000E+00	0.232
NB-95	-4.302E-01		2.433E+00	4.297E+00	0.000E+00	-0.100
ZR-95	8.336E-01		4.920E+00	8.934E+00	0.000E+00	0.093

MO-99	-1.840E+01	4.216E+01	7.206E+01	0.000E+00	-0.255
RU-103	-2.241E+00	2.669E+00	4.444E+00	0.000E+00	-0.504
RU-106	-4.104E+00	2.279E+01	4.036E+01	0.000E+00	-0.102
AG-110m	-7.625E-01	2.386E+00	4.160E+00	0.000E+00	-0.183
SN-113	4.014E-01	3.486E+00	6.287E+00	0.000E+00	0.064
SB-124	-1.369E+00	3.059E+00	4.460E+00	0.000E+00	-0.307
SB-125	9.456E-01	7.844E+00	1.415E+01	0.000E+00	0.067
TE-129M	1.066E+00	2.977E+01	5.368E+01	0.000E+00	0.020
I-131	1.801E+00	3.797E+00	6.644E+00	0.000E+00	0.271
BA-133	3.042E+00	4.109E+00	6.567E+00	0.000E+00	0.463
CS-134	1.222E-02	2.811E+00	4.375E+00	0.000E+00	0.003
CS-136	-8.321E-01	2.852E+00	4.957E+00	0.000E+00	-0.168
CS-137	-1.915E+00	2.929E+00	4.899E+00	0.000E+00	-0.391
CE-139	-4.256E-01	2.935E+00	4.950E+00	0.000E+00	-0.086
BA-140	8.373E+00	1.066E+01	2.044E+01	0.000E+00	0.410
LA-140	-2.741E-01	3.019E+00	5.701E+00	0.000E+00	-0.048
CE-141	-3.033E-01	5.868E+00	9.202E+00	0.000E+00	-0.033
CE-144	6.813E+00	2.468E+01	3.752E+01	0.000E+00	0.182
EU-152	2.469E+00	9.340E+00	1.602E+01	0.000E+00	0.154
EU-154	-1.372E-01	6.061E+00	1.033E+01	0.000E+00	-0.013
RA-226	-3.299E+01	7.367E+01	1.283E+02	0.000E+00	-0.257
AC-228	4.619E+00	1.069E+01	2.061E+01	0.000E+00	0.224
TH-228	-4.564E+00	5.808E+00	9.581E+00	0.000E+00	-0.476
TH-232	4.614E+00	1.068E+01	2.059E+01	0.000E+00	0.224
U-235	-1.391E+01	2.700E+01	3.922E+01	0.000E+00	-0.355
U-238	2.403E+01	3.069E+02	5.699E+02	0.000E+00	0.042
AM-241	-2.587E+01	1.576E+01	2.547E+01	0.000E+00	-1.016

A,23L29576-5 ,08/14/2006 18:13,08/11/2006 13:40, 3.089E+00,L29576-5 WG EX
B,23L29576-5 ,LIBD ,08/14/2006 10:01,233L082404

C,BE-7	,NO ,	4.984E+00,	2.456E+01,	4.444E+01,,	0.112
C,NA-24	,NO ,	5.651E+01,	8.972E+01,	1.819E+02,,	0.311
C,K-40	,NO ,	-1.468E+01,	4.627E+01,	1.007E+02,,	-0.146
C,CR-51	,NO ,	1.083E+01,	2.455E+01,	4.286E+01,,	0.253
C,MN-54	,NO ,	4.095E-01,	2.526E+00,	4.620E+00,,	0.089
C,CO-57	,NO ,	-7.020E-01,	2.897E+00,	4.896E+00,,	-0.143
C,CO-58	,NO ,	-4.681E-01,	2.747E+00,	4.815E+00,,	-0.097
C,FE-59	,NO ,	-4.110E+00,	5.728E+00,	9.213E+00,,	-0.446
C,CO-60	,NO ,	-5.874E-01,	2.215E+00,	4.077E+00,,	-0.144
C,ZN-65	,NO ,	6.120E-01,	5.471E+00,	8.776E+00,,	0.070
C,SE-75	,NO ,	-2.965E+00,	3.828E+00,	6.172E+00,,	-0.480
C,SR-85	,NO ,	4.413E+00,	2.808E+00,	5.513E+00,,	0.800
C,Y-88	,NO ,	-2.038E+00,	2.762E+00,	4.511E+00,,	-0.452
C,NB-94	,NO ,	1.053E+00,	2.418E+00,	4.534E+00,,	0.232
C,NB-95	,NO ,	-4.302E-01,	2.433E+00,	4.297E+00,,	-0.100
C,ZR-95	,NO ,	8.336E-01,	4.920E+00,	8.934E+00,,	0.093
C,MO-99	,NO ,	-1.840E+01,	4.216E+01,	7.206E+01,,	-0.255
C,RU-103	,NO ,	-2.241E+00,	2.669E+00,	4.444E+00,,	-0.504
C,RU-106	,NO ,	-4.104E+00,	2.279E+01,	4.036E+01,,	-0.102
C,AG-110m	,NO ,	-7.625E-01,	2.386E+00,	4.160E+00,,	-0.183
C,SN-113	,NO ,	4.014E-01,	3.486E+00,	6.287E+00,,	0.064
C,SB-124	,NO ,	-1.369E+00,	3.059E+00,	4.460E+00,,	-0.307
C,SB-125	,NO ,	9.456E-01,	7.844E+00,	1.415E+01,,	0.067
C,TE-129M	,NO ,	1.066E+00,	2.977E+01,	5.368E+01,,	0.020
C,I-131	,NO ,	1.801E+00,	3.797E+00,	6.644E+00,,	0.271
C,BA-133	,NO ,	3.042E+00,	4.109E+00,	6.567E+00,,	0.463
C,CS-134	,NO ,	1.222E-02,	2.811E+00,	4.375E+00,,	0.003
C,CS-136	,NO ,	-8.321E-01,	2.852E+00,	4.957E+00,,	-0.168
C,CS-137	,NO ,	-1.915E+00,	2.929E+00,	4.899E+00,,	-0.391
C,CE-139	,NO ,	-4.256E-01,	2.935E+00,	4.950E+00,,	-0.086
C,BA-140	,NO ,	8.373E+00,	1.066E+01,	2.044E+01,,	0.410
C,LA-140	,NO ,	-2.741E-01,	3.019E+00,	5.701E+00,,	-0.048
C,CE-141	,NO ,	-3.033E-01,	5.868E+00,	9.202E+00,,	-0.033
C,CE-144	,NO ,	6.813E+00,	2.468E+01,	3.752E+01,,	0.182
C,EU-152	,NO ,	2.469E+00,	9.340E+00,	1.602E+01,,	0.154
C,EU-154	,NO ,	-1.372E-01,	6.061E+00,	1.033E+01,,	-0.013
C,RA-226	,NO ,	-3.299E+01,	7.367E+01,	1.283E+02,,	-0.257
C,AC-228	,NO ,	4.619E+00,	1.069E+01,	2.061E+01,,	0.224
C,TH-228	,NO ,	-4.564E+00,	5.808E+00,	9.581E+00,,	-0.476
C,TH-232	,NO ,	4.614E+00,	1.068E+01,	2.059E+01,,	0.224
C,U-235	,NO ,	-1.391E+01,	2.700E+01,	3.922E+01,,	-0.355
C,U-238	,NO ,	2.403E+01,	3.069E+02,	5.699E+02,,	0.042
C,AM-241	,NO ,	-2.587E+01,	1.576E+01,	2.547E+01,,	-1.016

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29586 R1

Exelon

August 28, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29586
EX001-3ESPDRES-06

08/28/2006 16:16

Sample Receipt

The following samples were received on August 15, 2006 in good condition, unless otherwise noted.

Revision 1

The total strontium result for sample WG-DB-MW-DN-108I-081406-GL-022 (L29586-1)and WG-DB-MW-DN-108I-081406-GL-023 (L29586-2) was above 2 pCi/L. The samples were analyzed for strontium 90 and the results confirmed the total strontium results.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-DN-MW-DN-108I-081406-GL-022	L29586-1	
WG-DN-MW-DN-108I-081406-GL-023	L29586-2	
WG-DN-MW-DN-115S-081406-GL-024	L29586-3	
WG-DN-MW-DN-114I-081406-GL-025	L29586-4	
WG-DN-MW-DN-123S-080806-GL-026	L29586-5	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3 (DIST)	TBE-2010	
SR-90	TBE-2019	EPA 905.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29586
EX001-3ESPDRES-06

08/28/2006 16:16

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4324.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-108I-081406-GL-022	L29586-4	WG4324-1

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4320.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-119S-081106-GL-017	L29576-1	WG4320-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29586
EX001-3ESPDRES-06

08/28/2006 16:16

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4326.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-DN-MW-DN-108I-081406-GL-022	L29586-1	WG4326-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

08/15/06 10:29

SR #: SR09923

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPDRES-06 LIMS #: L29586

Initiated By: PMARSHALL
Init Date: 08/15/06 Receive Date: 08/15/06

Notification of Variance

Person Notified: Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes	No	NA	Comment
1	Shipping container custody seals present and intact.			NA	
2	Sample container custody seals present and intact.			NA	
3	Sample containers received in good condition	Y			
4	Chain of custody received with samples	Y			
5	All samples listed on chain of custody received	Y			
6	Sample container labels present and legible.	Y			
7	Information on container labels correspond with chain of custody	Y			
8	Sample(s) properly preserved and in appropriate container(s)		N		Gamma samples required 5mL of nitric to bring pH to 2.
9	Other (Describe)			NA	

L29586

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
513-942-4750 phone
513-942-8585 fax

SHIPPED TO (Laboratory Name): TELEDYNE BROWN ENGINEERING

REFERENCE NUMBER: 45136-23-0015

PROJECT NAME: EXCELON DRESDEN

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** GREGORY T LEWIS

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: GAMMA SPEC	SR 89/90	TRITIUM	REMARKS
	8-14-06	0945	WG-DN-MW-DN-108I-081406-GL-022	H_2O	2	X	X	X	
	↓	1010	-108I- -023	↓	2	X	X	X	
		1110	-115S- -024		2	X	X	X	
		1255	-114I- -025		2	X	X	X	
	8-8-06	1445	WG-DN-MW-DN-123S-080806-GL-026	H_2O	1			X	
					GTL				
			TOTAL NUMBER OF CONTAINERS		9				

RELINQUISHED BY: ① [signature]	DATE: 8-14-06 TIME: 1330	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: DHL EXPRESS **AIR BILL No.** 4532918774 6

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: G. LEWIS, N. ZIEGLER

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 8/15/06 TIME: 1100

004825

1001-00(SOURCE)GN-CO004

8/15/06

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

August 15, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on August 15, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by August 18, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPDRES-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-DN-MW-DN-108I-081406-GL-0	**L29586-1**		**08/14/06:0945**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-108I-081406-GL-0	**L29586-2**		**08/14/06:1010**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-115S-081406-GL-0	**L29586-3**		**08/14/06:1110**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-114I-081406-GL-0	**L29586-4**		**08/14/06:1255**	
WG	GELI	135.00		
WG	H-3 (DIST)	135.00		
WG	SR-90 (FAST)	175.00		
WG-DN-MW-DN-123S-080806-GL-0	**L29586-5**		**08/08/06:1445**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	H-3 (DIST)	135.00		

End of document

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L29586-1 Containernum 1

Prod	Analyst
SR-90	LCB
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/15/2006 13:43	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-1 Containernum 2

Prod	Analyst
SR-90	LCB
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/17/2006 15:50	029728	Lauren Larsen	030854	Donna Webb
08/17/2006 15:51	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-2 Containernum 1

Prod	Analyst
SR-90	LCB
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/15/2006 13:43	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-2 Containernum 2

Prod	Analyst
SR-90	LCB
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb

Internal Chain of Custody

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Sample # L29586-2 Containernum 2

Relinquish Date			Received By	
08/16/2006 17:28	029728	Lauren Larsen	030854	Donna Webb
08/16/2006 17:28	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-3 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/15/2006 13:43	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-3 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/17/2006 15:50	029728	Lauren Larsen	030854	Donna Webb
08/17/2006 15:51	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-4 Containernum 1

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb
08/15/2006 13:43	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-4 Containernum 2

Prod	Analyst
H-3 (DIST)	DW
SR-90 (FAST)	LCB
GELI	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	030854	Donna Webb	029728	Lauren Larsen
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb

****

Sample # L29586-4 Containernum 2

Relinquish Date			Received By	
08/17/2006 15:50	029728	Lauren Larsen	030854	Donna Webb
08/17/2006 15:51	030854	Donna Webb	099999	Sample Custodian

****

Sample # L29586-5 Containernum 1

Prod	Analyst
H-3 (DIST)	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian
08/15/2006 12:43	099999	Sample Custodian	030854	Donna Webb

****

Sample # L29586-5 Containernum 2

Prod	Analyst
H-3 (DIST)	DW

Relinquish Date	Relinquish By		Received By	
08/15/2006 00:00			099999	Sample Custodian

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29586

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L29586-1 WG WG-DN-MW-DN-108I-081406-GL-022

Process step	Prod	Analyst	Date
Login		RCHARLES	08/15/06
Aliquot	GELI	DW	08/15/06
Aliquot	H-3 (DIST)	DW	08/15/06
Aliquot	SR-90	LCB	08/15/06
Aliquot	SR-90 (FAST)	LCB	08/15/06
Count Room	GELI	ILL	08/16/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90	KOJ	08/28/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

****

L29586-2 WG WG-DN-MW-DN-108I-081406-GL-023

Process step	Prod	Analyst	Date
Login		RCHARLES	08/15/06
Aliquot	GELI	DW	08/15/06
Aliquot	H-3 (DIST)	DW	08/15/06
Aliquot	SR-90	LCB	08/15/06
Aliquot	SR-90 (FAST)	LCB	08/15/06
Count Room	GELI	ILL	08/16/06
Count Room	H-3 (DIST)	KOJ	08/15/06
Count Room	SR-90	KOJ	08/28/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

****

L29586-3 WG WG-DN-MW-DN-115S-081406-GL-024

Process step	Prod	Analyst	Date
Login		PMARSHALL	08/15/06
Aliquot	GELI	DW	08/15/06
Aliquot	H-3 (DIST)	DW	08/15/06
Aliquot	SR-90 (FAST)	LCB	08/15/06
Count Room	GELI	ILL	08/16/06
Count Room	H-3 (DIST)	KOJ	08/16/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

****

L29586-4 WG WG-DN-MW-DN-114I-081406-GL-025

Process step	Prod	Analyst	Date
Login		PMARSHALL	08/15/06
Aliquot	GELI	DW	08/15/06
Aliquot	H-3 (DIST)	DW	08/15/06
Aliquot	SR-90 (FAST)	LCB	08/15/06
Count Room	GELI	ILL	08/16/06
Count Room	H-3 (DIST)	KOJ	08/16/06
Count Room	SR-90 (FAST)	KOJ	08/16/06

****

L29586-5 WG WG-DN-MW-DN-123S-080806-GL-026

Process step	Prod	Analyst	Date
Login		PMARSHALL	08/15/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29586

L29586-5	**WG**	**WG-DN-MW-DN-123S-080806-GL-026**		
Aliquot	H-3 (DIST)		DW	08/15/06
Count Room	H-3 (DIST)		KOJ	08/16/06

Analytical Results Summary

Report of Analysis

08/28/06 16:03

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29586

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-108I-081406-GL-022** Collect Start: 08/14/2006 09:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/15/2006 % Moisture:
LIMS Number: L29586-1

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	1.70E+02	1.22E+02	**1.84E+02**	pCi/L		10	ml		08/15/06	60	M	U		
SR-90	2019	**4.74E+00**	2.45E+00	3.43E+00	pCi/L		450	ml	08/14/06 09:45	08/28/06	50	M	+		
TOTAL SR	2018	**3.21E+00**	1.00E+00	1.48E+00	pCi/L		450	ml	08/14/06 09:45	08/16/06	100	M	+	High	
MN-54	2007	-1.52E+00	1.97E+00	**3.14E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
CO-58	2007	1.60E-01	1.84E+00	**3.07E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
FE-59	2007	4.07E-01	3.72E+00	**6.05E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
CO-60	2007	-8.05E-01	2.96E+00	**4.32E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
ZN-65	2007	-4.74E+00	4.97E+00	**6.38E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
NB-95	2007	-2.04E-01	2.11E+00	**3.04E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
ZR-95	2007	1.37E+00	3.13E+00	**5.31E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
CS-134	2007	1.26E+00	2.04E+00	**2.95E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
CS-137	2007	5.24E-01	1.97E+00	**3.34E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
BA-140	2007	3.98E+00	7.12E+00	**1.18E+01**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No
LA-140	2007	-1.55E+00	2.55E+00	**4.00E+00**	pCi/L		1005.08	ml	08/14/06 09:45	08/16/06	62920	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

08/28/06 16:03

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29586

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-108I-081406-GL-023** Collect Start: 08/14/2006 10:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/15/2006 % Moisture:
LIMS Number: L29586-2

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**2.10E+02**	1.24E+02	1.83E+02	pCi/L		10	ml		08/15/06	60	M	+		
SR-90	2019	**2.17E+00**	7.83E-01	1.05E+00	pCi/L		450	ml	08/14/06 10:10	08/28/06	180	M	+		
TOTAL SR	2018	**2.72E+00**	1.01E+00	1.59E+00	pCi/L		450	ml	08/14/06 10:10	08/16/06	100	M	+	High	
MN-54	2007	-5.66E-01	4.13E+00	**6.56E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
CO-58	2007	-1.03E+00	3.73E+00	**5.82E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
FE-59	2007	3.62E+00	6.81E+00	**1.22E+01**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
CO-60	2007	2.22E+00	3.80E+00	**6.82E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
ZN-65	2007	2.32E+00	8.10E+00	**1.23E+01**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
NB-95	2007	5.00E-01	4.08E+00	**6.73E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
ZR-95	2007	-5.25E+00	6.03E+00	**8.56E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
CS-134	2007	1.57E+00	4.04E+00	**6.13E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
CS-137	2007	-3.13E+00	3.71E+00	**5.43E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
BA-140	2007	-1.64E+00	1.43E+01	**2.37E+01**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No
LA-140	2007	-3.61E+00	4.74E+00	**6.73E+00**	pCi/L		3137.22	ml	08/14/06 10:10	08/16/06	7382	Sec	U		No

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U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

Report of Analysis

08/28/06 16:03

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29586

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-115S-081406-GL-024** Collect Start: 08/14/2006 11:10 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/15/2006 % Moisture:
LIMS Number: L29586-3

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	1.79E+02	1.21E+02	**1.81E+02**	pCi/L		10	ml		08/16/06	60	M	U		
TOTAL SR	2018	1.33E-01	9.14E-01	**1.88E+00**	pCi/L		450	ml	08/14/06 11:10	08/16/06	100	M	U		
MN-54	2007	1.47E+00	2.41E+00	**4.14E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
CO-58	2007	-1.74E+00	2.31E+00	**3.47E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
FE-59	2007	-2.38E+00	4.65E+00	**7.38E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
CO-60	2007	-2.40E+00	2.22E+00	**3.05E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
ZN-65	2007	2.03E+00	5.53E+00	**8.44E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
NB-95	2007	1.15E+00	2.59E+00	**4.40E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
ZR-95	2007	-1.27E-01	4.51E+00	**7.36E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
CS-134	2007	1.21E+00	2.35E+00	**3.58E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
CS-137	2007	1.48E+00	2.92E+00	**4.99E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
BA-140	2007	-3.19E+00	8.96E+00	**1.45E+01**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No
LA-140	2007	-2.17E-01	3.26E+00	**5.30E+00**	pCi/L		3136.73	ml	08/14/06 11:10	08/16/06	12557	Sec	U		No

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MDC - Minimum Detectable Concentration

Report of Analysis

08/28/06 16:03

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29586

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPDRES-06

Sample ID: **WG-DN-MW-DN-114I-081406-GL-025** Collect Start: 08/14/2006 12:55 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/15/2006 % Moisture:
LIMS Number: L29586-4

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**4.19E+03**	4.73E+02	3.31E+02	pCi/L		10	ml		08/16/06	18.36	M	+	High	
TOTAL SR	2018	-2.59E-01	6.27E-01	**1.36E+00**	pCi/L		450	ml	08/14/06 12:55	08/16/06	100	M	U		
MN-54	2007	-4.32E+00	2.71E+00	**3.65E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
CO-58	2007	-5.11E-01	2.55E+00	**4.08E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
FE-59	2007	-7.77E-01	5.37E+00	**8.47E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
CO-60	2007	1.23E+00	2.70E+00	**4.75E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
ZN-65	2007	2.71E+00	6.10E+00	**9.15E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
NB-95	2007	2.53E+00	3.10E+00	**4.87E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
ZR-95	2007	2.11E+00	4.42E+00	**7.61E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
CS-134	2007	-4.20E-01	2.84E+00	**4.03E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
CS-137	2007	1.10E+00	2.83E+00	**4.85E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
BA-140	2007	-1.42E+00	1.01E+01	**1.68E+01**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No
LA-140	2007	-2.22E+00	3.17E+00	**4.57E+00**	pCi/L		2955.54	ml	08/14/06 12:55	08/16/06	11457	Sec	U		No

Sample ID: **WG-DN-MW-DN-123S-080806-GL-026** Collect Start: 08/08/2006 14:45 Matrix: Ground Water (WG)
Station: Collect Stop: Volume:
Description: Receive Date: 08/15/2006 % Moisture:
LIMS Number: L29586-5

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	-1.08E+01	1.10E+02	**1.83E+02**	pCi/L		10	ml		08/16/06	60	M	U		

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

QC Results Summary

QC Summary Report for L29586

8/28/2006 4:17:27PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4320-1	H-3 (DIST)	WO	08/15/2006 14:44	< 1.880E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4320-2	H-3 (DIST)	WO	08/15/2006 15:48	5.05E+002	5.230E+02	pCi/Total	103.6	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4320-3 L29576-1	H-3 (DIST)	WG	08/15/2006 16:06	< 1.830E+02	< 1.860E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L29586

8/28/2006 4:17:27PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4326-1	TOTAL SR	WO	08/16/2006 17:42	< 7.620E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4326-2	TOTAL SR	WO	08/16/2006 17:42	5.84E+001	5.700E+01	pCi/Total	97.6	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4326-3 L29586-1	TOTAL SR	WG	08/16/2006 17:42	3.210E+00	3.200E+00	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Aug 28 2006, 04:19 pm

Work Order: *L29586* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29586-1		H-3 DIST		10 ml			0		15-aug-06 22:06	LS7	166	60	1.98	60	.207		DW
WG-DN-MW-DN-108I-081406-GL-022																	
Activity: 1.7E+02	Error: 1.22E+02		MDC: 1.84E+02 *														
L29586-2		H-3 DIST		10 ml			0		15-aug-06 23:10	LS7	177	60	1.98	60	.209		DW
WG-DN-MW-DN-108I-081406-GL-023																	
Activity: 2.1E+02 *	Error: 1.24E+02		MDC: 1.83E+02														
L29586-3		H-3 DIST		10 ml			0		16-aug-06 00:13	LS7	169	60	1.98	60	.211		DW
WG-DN-MW-DN-115S-081406-GL-024																	
Activity: 1.79E+02	Error: 1.21E+02		MDC: 1.81E+02 *														
L29586-4		H-3 DIST		10 ml			0		16-aug-06 01:17	LS7	392	18.36	1.98	60	.208		DW
WG-DN-MW-DN-114I-081406-GL-025																	
Activity: 4.19E+03 *	Error: 4.73E+02		MDC: 3.31E+02														
L29586-5		H-3 DIST		10 ml			0		16-aug-06 01:38	LS7	116	60	1.98	60	.209		DW
WG-DN-MW-DN-123S-080806-GL-026																	
Activity: -1.08E+01	Error: 1.1E+02		MDC: 1.83E+02 *														

Raw Data Sheet (rawdata)
Aug 28 2006, 04:19 pm

Work Order: *L29586* Customer: *Exelon*

Nuclide: *SR-90* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29586-1		SR-90	14-aug-06 09:45	450 ml	16-aug-06 14:30	28-aug-06 09:00	0.0263	77.81	28-aug-06 16:52	Y1C	58	50	51	100	.449	.878	LCB
WG-DN-MW-DN-108I-081406-GL-022																	
Activity: 4.74E+00 * Error: 2.45E+00 MDC: 3.43E+00																	
L29586-2		SR-90	14-aug-06 10:10	450 ml	16-aug-06 14:30	28-aug-06 09:00	0.0348	102.96	28-aug-06 15:30	Y1B	159	180	84	200	.474	.902	LCB
WG-DN-MW-DN-108I-081406-GL-023																	
Activity: 2.17E+00 * Error: 7.83E-01 MDC: 1.05E+00																	

Work Order: *L29586* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPDRES-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29586-1		TOTAL SR	14-aug-06 09:45	450 ml	16-aug-06 14:30		0	72.25	16-aug-06 17:42	X2A	148	100	264	400	.354	1	LCB
WG-DN-MW-DN-108I-081406-GL-022																	
Activity: 3.21E+00 * Error: 1E+00 MDC: 1.48E+00																	
L29586-2		TOTAL SR	14-aug-06 10:10	450 ml	16-aug-06 14:30		0	72.25	16-aug-06 17:42	X2B	140	100	289	400	.345	1	LCB
WG-DN-MW-DN-108I-081406-GL-023																	
Activity: 2.72E+00 * Error: 1.01E+00 MDC: 1.59E+00																	
L29586-3		TOTAL SR	14-aug-06 11:10	450 ml	16-aug-06 14:30		0	60.16	16-aug-06 17:42	X2C	72	100	277	400	.344	1	LCB
WG-DN-MW-DN-115S-081406-GL-024																	
Activity: 1.33E-01 Error: 9.14E-01 MDC: 1.88E+00 *																	
L29586-4		TOTAL SR	14-aug-06 12:55	450 ml	16-aug-06 14:30		0	87.36	16-aug-06 17:42	X2D	69	100	307	400	.343	1	LCB
WG-DN-MW-DN-114I-081406-GL-025																	
Activity: -2.59E-01 Error: 6.27E-01 MDC: 1.36E+00 *																	

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-AUG-2006 13:40:02.68
TBE23 03017322 HpGe ********** Aquisition Date/Time: 17-AUG-2006 11:45:59.16

LIMS No., Customer Name, Client ID: WG WG4324-1 DRES

Sample ID : 23WG4324-1
Sample Type : WG
Quantity : 2.95550E+00 L
Start Channel : 50 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 14-AUG-2006 12:55:00.
Geometry : 233L082404
BKGFILE : 23BG072806MT
Real Time : 0 01:53:55.48
Live time : 0 01:53:50.79

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	63.72*	6	316	1.10	127.67	1.06E+00	8.69E-04	536.3	
2	0	77.91*	65	451	1.05	156.00	1.56E+00	9.58E-03	65.2	
3	0	92.39*	61	328	0.85	184.94	1.93E+00	8.92E-03	58.4	
4	0	186.24*	54	242	1.45	372.44	2.17E+00	7.95E-03	58.3	
5	0	243.01	75	278	0.76	485.88	1.88E+00	1.09E-02	46.2	
6	0	295.08*	161	107	1.10	589.93	1.64E+00	2.35E-02	13.9	
7	0	351.86*	282	100	1.20	703.41	1.43E+00	4.12E-02	9.2	
8	0	595.45	41	32	3.87	1190.42	9.56E-01	5.93E-03	33.0	
9	0	609.22*	256	73	1.18	1217.95	9.40E-01	3.75E-02	9.5	
10	0	1120.44*	50	24	1.75	2240.86	6.16E-01	7.28E-03	25.2	
11	0	1460.41*	30	12	1.82	2921.73	5.10E-01	4.37E-03	42.4	
12	0	1764.13*	51	3	1.32	3530.40	4.38E-01	7.43E-03	17.3	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	30	10.67*	5.097E-01	7.348E+01	7.348E+01	84.81
RA-226	186.21	54	3.28*	2.172E+00	1.021E+02	1.021E+02	116.51

Flag: "*" = Keyline

Sample ID : 23WG4324-1 Acquisition date : 17-AUG-2006 11:45:59

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.348E+01	7.348E+01	6.232E+01	84.81	
RA-226	1600.00Y	1.00	1.021E+02	1.021E+02	1.189E+02	116.51	
	Total Activity :		1.756E+02	1.756E+02			
	Grand Total Activity :		1.756E+02	1.756E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 23WG4324-1
Acquisition date : 17-AUG-2006 11:45:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	63.72	6	316	1.10	127.67	123	8	8.69E-04	****	1.06E+00	
0	77.91	65	451	1.05	156.00	151	11	9.58E-03	****	1.56E+00	
0	92.39	61	328	0.85	184.94	181	9	8.92E-03	****	1.93E+00	
0	243.01	75	278	0.76	485.88	480	12	1.09E-02	92.3	1.88E+00	
0	295.08	161	107	1.10	589.93	586	8	2.35E-02	27.8	1.64E+00	
0	351.86	282	100	1.20	703.41	698	10	4.12E-02	18.4	1.43E+00	
0	595.45	41	32	3.87	1190.42	1183	13	5.93E-03	66.0	9.56E-01	
0	609.22	256	73	1.18	1217.95	1212	13	3.75E-02	19.1	9.40E-01	
0	1120.44	50	24	1.75	2240.86	2235	11	7.28E-03	50.3	6.16E-01	
0	1764.13	51	3	1.32	3530.40	3524	13	7.43E-03	34.5	4.38E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.348E+01	7.348E+01	6.232E+01	84.81	
RA-226	1600.00Y	1.00	1.021E+02	1.021E+02	1.189E+02	116.51	
	Total Activity :		1.756E+02	1.756E+02			
	Grand Total Activity :		1.756E+02	1.756E+02			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.348E+01	6.232E+01	5.568E+01	0.000E+00	1.320
RA-226	1.021E+02	1.189E+02	1.465E+02	0.000E+00	0.697

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-2.163E+01	2.362E+01	3.909E+01	0.000E+00	-0.553
NA-24	5.462E+00	8.338E+01	1.586E+02	0.000E+00	0.034
CR-51	-1.314E+01	2.999E+01	4.915E+01	0.000E+00	-0.267
MN-54	-3.197E-01	2.954E+00	5.231E+00	0.000E+00	-0.061
CO-57	-5.051E-01	3.307E+00	5.611E+00	0.000E+00	-0.090
CO-58	-8.411E-01	3.129E+00	5.427E+00	0.000E+00	-0.155
FE-59	-3.819E-01	6.337E+00	1.117E+01	0.000E+00	-0.034
CO-60	2.600E+00	2.974E+00	6.253E+00	0.000E+00	0.416
ZN-65	-3.020E+00	8.012E+00	1.138E+01	0.000E+00	-0.265
SE-75	-2.900E+00	4.539E+00	7.382E+00	0.000E+00	-0.393
SR-85	-2.373E+00	3.921E+00	6.626E+00	0.000E+00	-0.358
Y-88	2.686E-01	3.431E+00	6.567E+00	0.000E+00	0.041
NB-94	-1.098E+00	2.850E+00	4.903E+00	0.000E+00	-0.224
NB-95	5.211E-02	3.492E+00	6.191E+00	0.000E+00	0.008
ZR-95	-7.854E-02	5.257E+00	9.429E+00	0.000E+00	-0.008
MO-99	-1.715E+01	5.083E+01	8.754E+01	0.000E+00	-0.196
RU-103	-1.693E-01	3.021E+00	5.402E+00	0.000E+00	-0.031
RU-106	-1.520E+01	2.704E+01	4.587E+01	0.000E+00	-0.331
AG-110m	-3.567E-01	3.021E+00	5.348E+00	0.000E+00	-0.067
SN-113	1.242E+00	4.100E+00	7.474E+00	0.000E+00	0.166
SB-124	1.516E-01	3.669E+00	5.401E+00	0.000E+00	0.028
SB-125	-1.080E+00	8.975E+00	1.592E+01	0.000E+00	-0.068
TE-129M	7.561E-03	3.693E+01	6.605E+01	0.000E+00	0.000
I-131	-3.427E+00	4.322E+00	6.857E+00	0.000E+00	-0.500
BA-133	-2.588E-01	5.291E+00	7.747E+00	0.000E+00	-0.033
CS-134	1.075E+00	3.280E+00	5.316E+00	0.000E+00	0.202
CS-136	6.576E-01	3.247E+00	5.991E+00	0.000E+00	0.110
CS-137	-6.371E-01	3.644E+00	6.379E+00	0.000E+00	-0.100
CE-139	-8.301E-01	3.461E+00	5.810E+00	0.000E+00	-0.143
BA-140	-2.103E+00	1.283E+01	2.266E+01	0.000E+00	-0.093
LA-140	1.028E+00	4.079E+00	7.934E+00	0.000E+00	0.130
CE-141	1.403E+00	6.090E+00	1.045E+01	0.000E+00	0.134
CE-144	1.444E+01	2.663E+01	4.626E+01	0.000E+00	0.312
EU-152	-3.533E+00	1.083E+01	1.785E+01	0.000E+00	-0.198
EU-154	-3.903E+00	7.046E+00	1.176E+01	0.000E+00	-0.332
AC-228	3.429E-01	1.179E+01	2.201E+01	0.000E+00	0.016
TH-228	4.119E+00	7.400E+00	1.164E+01	0.000E+00	0.354
TH-232	3.425E-01	1.178E+01	2.199E+01	0.000E+00	0.016
U-235	-1.497E+01	2.733E+01	4.533E+01	0.000E+00	-0.330
U-238	-5.434E+00	3.464E+02	6.378E+02	0.000E+00	-0.009
AM-241	4.838E+00	2.124E+01	3.289E+01	0.000E+00	0.147

A,23WG4324-1 ,08/17/2006 13:40,08/14/2006 12:55, 2.955E+00,WG WG4324-1 DR
B,23WG4324-1 ,LIBD ,08/14/2006 10:01,233L082404

C,K-40	,YES,	7.348E+01,	6.232E+01,	5.568E+01,,	1.320
C,RA-226	,YES,	1.021E+02,	1.189E+02,	1.465E+02,,	0.697
C,BE-7	,NO ,	-2.163E+01,	2.362E+01,	3.909E+01,,	-0.553
C,NA-24	,NO ,	5.462E+00,	8.338E+01,	1.586E+02,,	0.034
C,CR-51	,NO ,	-1.314E+01,	2.999E+01,	4.915E+01,,	-0.267
C,MN-54	,NO ,	-3.197E-01,	2.954E+00,	5.231E+00,,	-0.061
C,CO-57	,NO ,	-5.051E-01,	3.307E+00,	5.611E+00,,	-0.090
C,CO-58	,NO ,	-8.411E-01,	3.129E+00,	5.427E+00,,	-0.155
C,FE-59	,NO ,	-3.819E-01,	6.337E+00,	1.117E+01,,	-0.034
C,CO-60	,NO ,	2.600E+00,	2.974E+00,	6.253E+00,,	0.416
C,ZN-65	,NO ,	-3.020E+00,	8.012E+00,	1.138E+01,,	-0.265
C,SE-75	,NO ,	-2.900E+00,	4.539E+00,	7.382E+00,,	-0.393
C,SR-85	,NO ,	-2.373E+00,	3.921E+00,	6.626E+00,,	-0.358
C,Y-88	,NO ,	2.686E-01,	3.431E+00,	6.567E+00,,	0.041
C,NB-94	,NO ,	-1.098E+00,	2.850E+00,	4.903E+00,,	-0.224
C,NB-95	,NO ,	5.211E-02,	3.492E+00,	6.191E+00,,	0.008
C,ZR-95	,NO ,	-7.854E-02,	5.257E+00,	9.429E+00,,	-0.008
C,MO-99	,NO ,	-1.715E+01,	5.083E+01,	8.754E+01,,	-0.196
C,RU-103	,NO ,	-1.693E-01,	3.021E+00,	5.402E+00,,	-0.031
C,RU-106	,NO ,	-1.520E+01,	2.704E+01,	4.587E+01,,	-0.331
C,AG-110m	,NO ,	-3.567E-01,	3.021E+00,	5.348E+00,,	-0.067
C,SN-113	,NO ,	1.242E+00,	4.100E+00,	7.474E+00,,	0.166
C,SB-124	,NO ,	1.516E-01,	3.669E+00,	5.401E+00,,	0.028
C,SB-125	,NO ,	-1.080E+00,	8.975E+00,	1.592E+01,,	-0.068
C,TE-129M	,NO ,	7.561E-03,	3.693E+01,	6.605E+01,,	0.000
C,I-131	,NO ,	-3.427E+00,	4.322E+00,	6.857E+00,,	-0.500
C,BA-133	,NO ,	-2.588E-01,	5.291E+00,	7.747E+00,,	-0.033
C,CS-134	,NO ,	1.075E+00,	3.280E+00,	5.316E+00,,	0.202
C,CS-136	,NO ,	6.576E-01,	3.247E+00,	5.991E+00,,	0.110
C,CS-137	,NO ,	-6.371E-01,	3.644E+00,	6.379E+00,,	-0.100
C,CE-139	,NO ,	-8.301E-01,	3.461E+00,	5.810E+00,,	-0.143
C,BA-140	,NO ,	-2.103E+00,	1.283E+01,	2.266E+01,,	-0.093
C,LA-140	,NO ,	1.028E+00,	4.079E+00,	7.934E+00,,	0.130
C,CE-141	,NO ,	1.403E+00,	6.090E+00,	1.045E+01,,	0.134
C,CE-144	,NO ,	1.444E+01,	2.663E+01,	4.626E+01,,	0.312
C,EU-152	,NO ,	-3.533E+00,	1.083E+01,	1.785E+01,,	-0.198
C,EU-154	,NO ,	-3.903E+00,	7.046E+00,	1.176E+01,,	-0.332
C,AC-228	,NO ,	3.429E-01,	1.179E+01,	2.201E+01,,	0.016
C,TH-228	,NO ,	4.119E+00,	7.400E+00,	1.164E+01,,	0.354
C,TH-232	,NO ,	3.425E-01,	1.178E+01,	2.199E+01,,	0.016
C,U-235	,NO ,	-1.497E+01,	2.733E+01,	4.533E+01,,	-0.330
C,U-238	,NO ,	-5.434E+00,	3.464E+02,	6.378E+02,,	-0.009
C,AM-241	,NO ,	4.838E+00,	2.124E+01,	3.289E+01,,	0.147

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-AUG-2006 09:02:50.77
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 16-AUG-2006 15:33:57.87

LIMS No., Customer Name, Client ID: L29586-1 WG EX/DRES

Sample ID : 04L29586-1
Sample Type : WG
Quantity : 1.00510E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 14-AUG-2006 09:45:00.
Geometry : 041L082004
BKGFILE : 04BG072806MT
Real Time : 0 17:28:50.83
Live time : 0 17:28:40.39

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	6	63.48*	250	1524	1.61	127.93	1.00E+00	3.97E-03	32.6	3.77E+00
2	6	66.18*	254	1306	1.30	133.34	1.16E+00	4.03E-03	28.4	
3	4	74.82*	156	999	1.05	150.62	1.69E+00	2.48E-03	43.9	3.52E+00
4	4	76.94*	157	997	1.01	154.86	1.81E+00	2.49E-03	41.6	
5	4	87.24*	36	919	0.93	175.45	2.33E+00	5.73E-04	161.1	6.70E-01
6	1	139.60*	278	1163	1.37	280.17	3.29E+00	4.42E-03	24.7	7.67E+00
7	1	185.87*	17	1518	1.21	372.72	3.06E+00	2.71E-04	498.7	6.86E-01
8	1	198.32*	149	1216	1.25	397.62	2.97E+00	2.36E-03	47.1	8.08E-01
9	1	238.57*	138	751	1.14	478.13	2.66E+00	2.20E-03	42.8	2.56E+00
10	1	241.91	320	818	1.29	484.79	2.63E+00	5.08E-03	16.8	
11	1	295.21*	443	926	1.00	591.40	2.29E+00	7.04E-03	15.1	4.81E-01
12	1	338.40*	40	623	2.46	677.78	2.06E+00	6.30E-04	142.8	7.86E-01
13	1	351.94*	826	790	1.16	704.85	2.00E+00	1.31E-02	8.4	2.03E+00
14	1	596.08	221	483	3.82	1193.10	1.31E+00	3.52E-03	23.3	1.63E+00
15	1	609.27*	605	426	1.31	1219.48	1.28E+00	9.61E-03	9.4	8.62E-01
16	1	769.12	398	280	0.66	1539.15	1.05E+00	6.32E-03	8.3	4.08E+02
17	1	968.97*	26	162	1.80	1938.79	8.62E-01	4.05E-04	119.5	1.89E+00
18	1	1119.98*	158	177	1.86	2240.75	7.60E-01	2.51E-03	21.7	8.07E-01
19	1	1237.77*	139	111	3.45	2476.28	6.97E-01	2.21E-03	20.4	1.24E+00
20	1	1728.50	45	67	2.56	3457.45	5.40E-01	7.15E-04	35.3	5.02E+00
21	1	1763.95*	77	154	2.44	3528.33	5.33E-01	1.23E-03	47.2	2.45E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	17	3.28*	3.062E+00	7.253E+00	7.253E+00	997.38
TH-228	238.63	138	44.60*	2.659E+00	4.979E+00	4.992E+00	85.57
	240.98	320	3.95	2.634E+00	1.313E+02	1.316E+02	33.59
U-235	143.76	------	10.50*	3.283E+00	------	Line Not Found	------
	163.35	------	4.70	3.212E+00	------	Line Not Found	------
	185.71	17	54.00	3.062E+00	4.405E-01	4.405E-01	997.38
	205.31	------	4.70	2.912E+00	------	Line Not Found	------

Flag: "*" = Keyline

Sample ID : 04L29586-1 Acquisition date : 16-AUG-2006 15:33:57

Total number of lines in spectrum	21	
Number of unidentified lines	17	
Number of lines tentatively identified by NID	4	19.05%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	7.253E+00	7.253E+00	72.34E+00	997.38	
TH-228	1.91Y	1.00	4.979E+00	4.992E+00	4.272E+00	85.57	
U-235	7.04E+08Y	1.00	4.405E-01	4.405E-01	43.94E-01	997.38	K
			---------	---------			
	Total Activity :		1.267E+01	1.269E+01			
	Grand Total Activity :		1.267E+01	1.269E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 04L29586-1 Acquisition date : 16-AUG-2006 15:33:57

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	63.48	250	1524	1.61	127.93	123	15	3.97E-03	65.1	1.00E+00	
6	66.18	254	1306	1.30	133.34	123	15	4.03E-03	56.7	1.16E+00	
4	74.82	156	999	1.05	150.62	142	17	2.48E-03	87.8	1.69E+00	
4	76.94	157	997	1.01	154.86	142	17	2.49E-03	83.1	1.81E+00	
4	87.24	36	919	0.93	175.45	164	15	5.73E-04	****	2.33E+00	
1	139.60	278	1163	1.37	280.17	277	8	4.42E-03	49.4	3.29E+00	
1	198.32	149	1216	1.25	397.62	393	9	2.36E-03	94.2	2.97E+00	
1	295.21	443	926	1.00	591.40	587	10	7.04E-03	30.2	2.29E+00	
1	338.40	40	623	2.46	677.78	673	10	6.30E-04	****	2.06E+00	
1	351.94	826	790	1.16	704.85	699	12	1.31E-02	16.9	2.00E+00	
1	596.08	221	483	3.82	1193.10	1186	16	3.52E-03	46.5	1.31E+00	
1	609.27	605	426	1.31	1219.48	1213	12	9.61E-03	18.8	1.28E+00	
1	769.12	398	280	0.66	1539.15	1532	11	6.32E-03	16.5	1.05E+00	
1	968.97	26	162	1.80	1938.79	1933	10	4.05E-04	****	8.62E-01	T
1	1119.98	158	177	1.86	2240.75	2235	13	2.51E-03	43.3	7.60E-01	
1	1237.77	139	111	3.45	2476.28	2470	15	2.21E-03	40.8	6.97E-01	
1	1728.50	45	67	2.56	3457.45	3453	10	7.15E-04	70.6	5.40E-01	
1	1763.95	77	154	2.44	3528.33	3520	22	1.23E-03	94.5	5.33E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	21	
Number of unidentified lines	17	
Number of lines tentatively identified by NID	4	19.05%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	7.253E+00	7.253E+00	72.34E+00	997.38	
TH-228	1.91Y	1.00	4.979E+00	4.992E+00	4.272E+00	85.57	
	Total Activity :		1.223E+01	1.224E+01			
	Grand Total Activity :		1.223E+01	1.224E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

RA-226	7.253E+00	7.234E+01	6.055E+01	0.000E+00	0.120
TH-228	4.992E+00	4.272E+00	4.742E+00	0.000E+00	1.053

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	6.234E+00		1.588E+01	2.621E+01	0.000E+00	0.238
NA-24	-5.205E+00		3.227E+01	5.309E+01	0.000E+00	-0.098
K-40	5.582E+00		3.774E+01	6.266E+01	0.000E+00	0.089
CR-51	4.696E-01		1.469E+01	2.455E+01	0.000E+00	0.019
MN-54	-1.522E+00		1.968E+00	3.142E+00	0.000E+00	-0.484
CO-57	-2.394E-01		1.366E+00	2.228E+00	0.000E+00	-0.107
CO-58	1.604E-01		1.843E+00	3.066E+00	0.000E+00	0.052
FE-59	4.074E-01		3.716E+00	6.051E+00	0.000E+00	0.067
CO-60	-8.050E-01		2.959E+00	4.321E+00	0.000E+00	-0.186
ZN-65	-4.735E+00		4.970E+00	6.378E+00	0.000E+00	-0.742
SE-75	1.591E-01		2.133E+00	3.608E+00	0.000E+00	0.044
SR-85	-1.921E+01		2.759E+00	3.682E+00	0.000E+00	-5.217
Y-88	1.031E+00		1.988E+00	3.370E+00	0.000E+00	0.306
NB-94	-1.269E+00		1.687E+00	2.735E+00	0.000E+00	-0.464
NB-95	-2.039E-01		2.113E+00	3.037E+00	0.000E+00	-0.067
ZR-95	1.369E+00		3.128E+00	5.311E+00	0.000E+00	0.258
MO-99	-1.077E+00		2.609E+01	4.345E+01	0.000E+00	-0.025
RU-103	-3.025E+00		1.878E+00	2.861E+00	0.000E+00	-1.057
RU-106	-2.866E+00		1.686E+01	2.671E+01	0.000E+00	-0.107
AG-110m	-4.582E-01		1.735E+00	2.888E+00	0.000E+00	-0.159
SN-113	2.982E+00		2.208E+00	3.799E+00	0.000E+00	0.785
SB-124	1.872E+00		2.818E+00	3.007E+00	0.000E+00	0.623
SB-125	1.081E+00		4.868E+00	8.046E+00	0.000E+00	0.134
TE-129M	-6.731E+00		2.038E+01	3.286E+01	0.000E+00	-0.205
I-131	-5.776E-01		2.167E+00	3.561E+00	0.000E+00	-0.162
BA-133	7.864E-01		2.584E+00	3.818E+00	0.000E+00	0.206
CS-134	1.256E+00		2.044E+00	2.954E+00	0.000E+00	0.425
CS-136	-4.857E-01		1.956E+00	3.199E+00	0.000E+00	-0.152
CS-137	5.238E-01		1.968E+00	3.343E+00	0.000E+00	0.157
CE-139	-7.962E-01		1.514E+00	2.410E+00	0.000E+00	-0.330
BA-140	3.978E+00		7.116E+00	1.175E+01	0.000E+00	0.338
LA-140	-1.547E+00		2.545E+00	3.995E+00	0.000E+00	-0.387
CE-141	-2.430E+00		2.615E+00	4.154E+00	0.000E+00	-0.585
CE-144	5.719E+00		1.078E+01	1.780E+01	0.000E+00	0.321
EU-152	4.026E-01		5.305E+00	8.549E+00	0.000E+00	0.047
EU-154	-2.812E-01		2.865E+00	4.679E+00	0.000E+00	-0.060
AC-228	-9.628E+00		1.114E+01	1.337E+01	0.000E+00	-0.720
TH-232	-9.620E+00		1.113E+01	1.336E+01	0.000E+00	-0.720
U-235	6.997E+00		1.266E+01	1.866E+01	0.000E+00	0.375
U-238	1.960E+01		2.186E+02	3.580E+02	0.000E+00	0.055
AM-241	1.116E+01		1.353E+01	2.103E+01	0.000E+00	0.531

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A,04L29586-1       ,08/17/2006 09:02,08/14/2006 09:45,   1.005E+00,L29586-1 WG EX
B,04L29586-1       ,LIBD                ,08/16/2006 15:06,041L082004
C,RA-226   ,YES,    7.253E+00,    7.234E+01,    6.055E+01,,     0.120
C,TH-228   ,YES,    4.992E+00,    4.272E+00,    4.742E+00,,     1.053
C,BE-7     ,NO ,    6.234E+00,    1.588E+01,    2.621E+01,,     0.238
C,NA-24    ,NO ,   -5.205E+00,    3.227E+01,    5.309E+01,,    -0.098
C,K-40     ,NO ,    5.582E+00,    3.774E+01,    6.266E+01,,     0.089
C,CR-51    ,NO ,    4.696E-01,    1.469E+01,    2.455E+01,,     0.019
C,MN-54    ,NO ,   -1.522E+00,    1.968E+00,    3.142E+00,,    -0.484
C,CO-57    ,NO ,   -2.394E-01,    1.366E+00,    2.228E+00,,    -0.107
C,CO-58    ,NO ,    1.604E-01,    1.843E+00,    3.066E+00,,     0.052
C,FE-59    ,NO ,    4.074E-01,    3.716E+00,    6.051E+00,,     0.067
C,CO-60    ,NO ,   -8.050E-01,    2.959E+00,    4.321E+00,,    -0.186
C,ZN-65    ,NO ,   -4.735E+00,    4.970E+00,    6.378E+00,,    -0.742
C,SE-75    ,NO ,    1.591E-01,    2.133E+00,    3.608E+00,,     0.044
C,SR-85    ,NO ,   -1.921E+01,    2.759E+00,    3.682E+00,,    -5.217
C,Y-88     ,NO ,    1.031E+00,    1.988E+00,    3.370E+00,,     0.306
C,NB-94    ,NO ,   -1.269E+00,    1.687E+00,    2.735E+00,,    -0.464
C,NB-95    ,NO ,   -2.039E-01,    2.113E+00,    3.037E+00,,    -0.067
C,ZR-95    ,NO ,    1.369E+00,    3.128E+00,    5.311E+00,,     0.258
C,MO-99    ,NO ,   -1.077E+00,    2.609E+01,    4.345E+01,,    -0.025
C,RU-103   ,NO ,   -3.025E+00,    1.878E+00,    2.861E+00,,    -1.057
C,RU-106   ,NO ,   -2.866E+00,    1.686E+01,    2.671E+01,,    -0.107
C,AG-110m  ,NO ,   -4.582E-01,    1.735E+00,    2.888E+00,,    -0.159
C,SN-113   ,NO ,    2.982E+00,    2.208E+00,    3.799E+00,,     0.785
C,SB-124   ,NO ,    1.872E+00,    2.818E+00,    3.007E+00,,     0.623
C,SB-125   ,NO ,    1.081E+00,    4.868E+00,    8.046E+00,,     0.134
C,TE-129M  ,NO ,   -6.731E+00,    2.038E+01,    3.286E+01,,    -0.205
C,I-131    ,NO ,   -5.776E-01,    2.167E+00,    3.561E+00,,    -0.162
C,BA-133   ,NO ,    7.864E-01,    2.584E+00,    3.818E+00,,     0.206
C,CS-134   ,NO ,    1.256E+00,    2.044E+00,    2.954E+00,,     0.425
C,CS-136   ,NO ,   -4.857E-01,    1.956E+00,    3.199E+00,,    -0.152
C,CS-137   ,NO ,    5.238E-01,    1.968E+00,    3.343E+00,,     0.157
C,CE-139   ,NO ,   -7.962E-01,    1.514E+00,    2.410E+00,,    -0.330
C,BA-140   ,NO ,    3.978E+00,    7.116E+00,    1.175E+01,,     0.338
C,LA-140   ,NO ,   -1.547E+00,    2.545E+00,    3.995E+00,,    -0.387
C,CE-141   ,NO ,   -2.430E+00,    2.615E+00,    4.154E+00,,    -0.585
C,CE-144   ,NO ,    5.719E+00,    1.078E+01,    1.780E+01,,     0.321
C,EU-152   ,NO ,    4.026E-01,    5.305E+00,    8.549E+00,,     0.047
C,EU-154   ,NO ,   -2.812E-01,    2.865E+00,    4.679E+00,,    -0.060
C,AC-228   ,NO ,   -9.628E+00,    1.114E+01,    1.337E+01,,    -0.720
C,TH-232   ,NO ,   -9.620E+00,    1.113E+01,    1.336E+01,,    -0.720
C,U-235    ,NO ,    6.997E+00,    1.266E+01,    1.866E+01,,     0.375
C,U-238    ,NO ,    1.960E+01,    2.186E+02,    3.580E+02,,     0.055
C,AM-241   ,NO ,    1.116E+01,    1.353E+01,    2.103E+01,,     0.531
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 16-AUG-2006 15:59:15.71
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 16-AUG-2006 13:56:07.45

LIMS No., Customer Name, Client ID: L29586-2 WG EX/DRES

Sample ID	: 15L29586-2	Smple Date:	14-AUG-2006 10:10:00.
Sample Type	: WG	Geometry	: 153L082604
Quantity	: 3.13720E+00 L	BKGFILE	: 15BG072806MT
Start Channel	: 40 Energy Tol : 1.00000	Real Time	: 0 02:03:02.37
End Channel	: 4090 Pk Srch Sens: 5.00000	Live time	: 0 02:03:01.53
MDA Constant	: 0.00 Library Used: LIBD		

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	295.25*	57	101	1.29	580.78	1.18E+00	7.68E-03	35.4	1.60E+00
2	1	351.60*	153	107	1.41	694.18	1.02E+00	2.07E-02	17.0	7.21E-01
3	1	609.02*	124	31	1.82	1212.02	6.43E-01	1.68E-02	14.3	8.86E-01
4	1	1119.20*	30	24	1.95	2237.72	3.97E-01	4.06E-03	43.7	7.68E-01
5	1	1192.83	14	13	1.26	2385.68	3.78E-01	1.85E-03	60.8	5.45E-01
6	1	1764.69*	19	7	3.30	3534.33	2.78E-01	2.54E-03	44.0	5.15E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Sample ID : 15L29586-2 Acquisition date : 16-AUG-2006 13:56:07

Total number of lines in spectrum	6	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	0	0.00%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 15L29586-2 Acquisition date : 16-AUG-2006 13:56:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	295.25	57	101	1.29	580.78	577	8	7.68E-03	70.7	1.18E+00	
1	351.60	153	107	1.41	694.18	688	13	2.07E-02	33.9	1.02E+00	
1	609.02	124	31	1.82	1212.02	1206	13	1.68E-02	28.5	6.43E-01	
1	1119.20	30	24	1.95	2237.72	2229	16	4.06E-03	87.5	3.97E-01	
1	1192.83	14	13	1.26	2385.68	2376	13	1.85E-03	****	3.78E-01	
1	1764.69	19	7	3.30	3534.33	3528	15	2.54E-03	87.9	2.78E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 6
Number of unidentified lines 6
Number of lines tentatively identified by NID 0 0.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	8.834E+00		2.826E+01	4.893E+01	0.000E+00	0.181
NA-24	1.576E+01		4.282E+01	7.443E+01	0.000E+00	0.212
K-40	2.322E+01		5.950E+01	1.223E+02	0.000E+00	0.190
CR-51	1.392E+00		3.213E+01	5.264E+01	0.000E+00	0.026
MN-54	-5.656E-01		4.125E+00	6.557E+00	0.000E+00	-0.086
CO-57	3.101E-01		3.509E+00	5.641E+00	0.000E+00	0.055
CO-58	-1.028E+00		3.732E+00	5.821E+00	0.000E+00	-0.177
FE-59	3.617E+00		6.810E+00	1.215E+01	0.000E+00	0.298
CO-60	2.220E+00		3.797E+00	6.824E+00	0.000E+00	0.325
ZN-65	2.321E+00		8.100E+00	1.229E+01	0.000E+00	0.189
SE-75	2.021E-01		4.652E+00	7.708E+00	0.000E+00	0.026
SR-85	-8.252E+00		4.625E+00	6.780E+00	0.000E+00	-1.217
Y-88	1.775E+00		3.931E+00	7.105E+00	0.000E+00	0.250
NB-94	3.582E+00		4.146E+00	7.353E+00	0.000E+00	0.487
NB-95	5.000E-01		4.080E+00	6.732E+00	0.000E+00	0.074
ZR-95	-5.251E+00		6.025E+00	8.556E+00	0.000E+00	-0.614
MO-99	-3.768E+00		4.752E+01	7.677E+01	0.000E+00	-0.049
RU-103	-2.976E+00		3.889E+00	6.087E+00	0.000E+00	-0.489
RU-106	1.912E+01		3.734E+01	6.477E+01	0.000E+00	0.295
AG-110m	9.205E-01		3.341E+00	5.682E+00	0.000E+00	0.162
SN-113	2.253E+00		4.953E+00	8.290E+00	0.000E+00	0.272
SB-124	1.982E+00		3.996E+00	6.162E+00	0.000E+00	0.322

SB-125	3.686E+00	1.122E+01	1.851E+01	0.000E+00	0.199
TE-129M	-1.322E+01	4.185E+01	6.867E+01	0.000E+00	-0.193
I-131	-2.142E+00	4.330E+00	6.709E+00	0.000E+00	-0.319
BA-133	-2.669E+00	5.807E+00	7.803E+00	0.000E+00	-0.342
CS-134	1.571E+00	4.039E+00	6.130E+00	0.000E+00	0.256
CS-136	9.858E-01	4.320E+00	7.195E+00	0.000E+00	0.137
CS-137	-3.126E+00	3.706E+00	5.429E+00	0.000E+00	-0.576
CE-139	-2.933E-01	3.123E+00	5.263E+00	0.000E+00	-0.056
BA-140	-1.635E+00	1.434E+01	2.368E+01	0.000E+00	-0.069
LA-140	-3.605E+00	4.741E+00	6.733E+00	0.000E+00	-0.535
CE-141	6.331E+00	5.885E+00	9.909E+00	0.000E+00	0.639
CE-144	-1.228E+01	2.569E+01	3.976E+01	0.000E+00	-0.309
EU-152	-3.628E+00	1.165E+01	1.779E+01	0.000E+00	-0.204
EU-154	-1.996E+00	7.430E+00	1.171E+01	0.000E+00	-0.170
RA-226	-5.591E+01	8.346E+01	1.382E+02	0.000E+00	-0.404
AC-228	3.043E-01	1.552E+01	2.569E+01	0.000E+00	0.012
TH-228	-9.095E+00	6.897E+00	1.089E+01	0.000E+00	-0.835
TH-232	3.041E-01	1.551E+01	2.567E+01	0.000E+00	0.012
U-235	5.422E+00	2.704E+01	4.332E+01	0.000E+00	0.125
U-238	-3.550E+02	4.110E+02	6.272E+02	0.000E+00	-0.566
AM-241	-1.490E+01	3.833E+01	6.190E+01	0.000E+00	-0.241

A,15L29586-2 ,08/16/2006 15:59,08/14/2006 10:10, 3.137E+00,L29586-2 WG EX
B,15L29586-2 ,LIBD ,08/16/2006 09:32,153L082604

C,BE-7	,NO ,	8.834E+00,	2.826E+01,	4.893E+01,,	0.181
C,NA-24	,NO ,	1.576E+01,	4.282E+01,	7.443E+01,,	0.212
C,K-40	,NO ,	2.322E+01,	5.950E+01,	1.223E+02,,	0.190
C,CR-51	,NO ,	1.392E+00,	3.213E+01,	5.264E+01,,	0.026
C,MN-54	,NO ,	-5.656E-01,	4.125E+00,	6.557E+00,,	-0.086
C,CO-57	,NO ,	3.101E-01,	3.509E+00,	5.641E+00,,	0.055
C,CO-58	,NO ,	-1.028E+00,	3.732E+00,	5.821E+00,,	-0.177
C,FE-59	,NO ,	3.617E+00,	6.810E+00,	1.215E+01,,	0.298
C,CO-60	,NO ,	2.220E+00,	3.797E+00,	6.824E+00,,	0.325
C,ZN-65	,NO ,	2.321E+00,	8.100E+00,	1.229E+01,,	0.189
C,SE-75	,NO ,	2.021E-01,	4.652E+00,	7.708E+00,,	0.026
C,SR-85	,NO ,	-8.252E+00,	4.625E+00,	6.780E+00,,	-1.217
C,Y-88	,NO ,	1.775E+00,	3.931E+00,	7.105E+00,,	0.250
C,NB-94	,NO ,	3.582E+00,	4.146E+00,	7.353E+00,,	0.487
C,NB-95	,NO ,	5.000E-01,	4.080E+00,	6.732E+00,,	0.074
C,ZR-95	,NO ,	-5.251E+00,	6.025E+00,	8.556E+00,,	-0.614
C,MO-99	,NO ,	-3.768E+00,	4.752E+01,	7.677E+01,,	-0.049
C,RU-103	,NO ,	-2.976E+00,	3.889E+00,	6.087E+00,,	-0.489
C,RU-106	,NO ,	1.912E+01,	3.734E+01,	6.477E+01,,	0.295
C,AG-110m	,NO ,	9.205E-01,	3.341E+00,	5.682E+00,,	0.162
C,SN-113	,NO ,	2.253E+00,	4.953E+00,	8.290E+00,,	0.272
C,SB-124	,NO ,	1.982E+00,	3.996E+00,	6.162E+00,,	0.322
C,SB-125	,NO ,	3.686E+00,	1.122E+01,	1.851E+01,,	0.199
C,TE-129M	,NO ,	-1.322E+01,	4.185E+01,	6.867E+01,,	-0.193
C,I-131	,NO ,	-2.142E+00,	4.330E+00,	6.709E+00,,	-0.319
C,BA-133	,NO ,	-2.669E+00,	5.807E+00,	7.803E+00,,	-0.342
C,CS-134	,NO ,	1.571E+00,	4.039E+00,	6.130E+00,,	0.256
C,CS-136	,NO ,	9.858E-01,	4.320E+00,	7.195E+00,,	0.137
C,CS-137	,NO ,	-3.126E+00,	3.706E+00,	5.429E+00,,	-0.576
C,CE-139	,NO ,	-2.933E-01,	3.123E+00,	5.263E+00,,	-0.056
C,BA-140	,NO ,	-1.635E+00,	1.434E+01,	2.368E+01,,	-0.069
C,LA-140	,NO ,	-3.605E+00,	4.741E+00,	6.733E+00,,	-0.535
C,CE-141	,NO ,	6.331E+00,	5.885E+00,	9.909E+00,,	0.639
C,CE-144	,NO ,	-1.228E+01,	2.569E+01,	3.976E+01,,	-0.309
C,EU-152	,NO ,	-3.628E+00,	1.165E+01,	1.779E+01,,	-0.204
C,EU-154	,NO ,	-1.996E+00,	7.430E+00,	1.171E+01,,	-0.170
C,RA-226	,NO ,	-5.591E+01,	8.346E+01,	1.382E+02,,	-0.404
C,AC-228	,NO ,	3.043E-01,	1.552E+01,	2.569E+01,,	0.012
C,TH-228	,NO ,	-9.095E+00,	6.897E+00,	1.089E+01,,	-0.835
C,TH-232	,NO ,	3.041E-01,	1.551E+01,	2.567E+01,,	0.012
C,U-235	,NO ,	5.422E+00,	2.704E+01,	4.332E+01,,	0.125
C,U-238	,NO ,	-3.550E+02,	4.110E+02,	6.272E+02,,	-0.566
C,AM-241	,NO ,	-1.490E+01,	3.833E+01,	6.190E+01,,	-0.241

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 16-AUG-2006 17:58:48.01
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 16-AUG-2006 14:29:21.10

LIMS No., Customer Name, Client ID: L29586-3 WG EX/DRES

Sample ID	: 11L29586-3		Smple Date: 14-AUG-2006 11:10:00.
Sample Type	: WG		Geometry : 113L082304
Quantity	: 3.13670E+00 L		BKGFILE : 11BG072806MT
Start Channel	: 40	Energy Tol : 1.00000	Real Time : 0 03:29:21.74
End Channel	: 4090	Pk Srch Sens: 5.00000	Live time : 0 03:29:16.67
MDA Constant	: 0.00	Library Used: LIBD	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.62	91	557	1.53	132.56	6.97E-01	7.21E-03	44.5	
2	0	139.79*	93	383	1.03	279.39	1.90E+00	7.41E-03	39.9	
3	0	198.12*	87	225	1.45	396.40	1.75E+00	6.95E-03	31.8	
4	0	238.51*	4	206	1.11	477.42	1.58E+00	3.26E-04	645.4	
5	0	294.94*	64	215	1.30	590.56	1.37E+00	5.08E-03	44.6	
6	0	351.28*	159	153	1.70	703.54	1.20E+00	1.26E-02	18.4	
7	0	595.78	62	54	1.20	1193.45	8.04E-01	4.91E-03	25.8	
8	0	609.28*	154	85	1.74	1220.49	7.90E-01	1.22E-02	15.6	
9	0	1120.92	57	24	2.40	2244.26	4.86E-01	4.56E-03	22.5	
10	0	1461.07*	7	53	1.96	2923.80	3.92E-01	5.19E-04	291.4	
11	0	1762.36*	34	15	2.91	3525.02	3.39E-01	2.69E-03	34.0	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	7	10.67*	3.918E-01	1.069E+01	1.069E+01	582.77
TH-228	238.63	4	44.60*	1.577E+00	3.997E-01	4.006E-01	1290.82
	240.98	------	3.95	1.567E+00	------	Line Not Found	------

Flag: "*" = Keyline

Sample ID : 11L29586-3 Acquisition date : 16-AUG-2006 14:29:21

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.069E+01	1.069E+01	6.228E+01	582.77	
TH-228	1.91Y	1.00	3.997E-01	4.006E-01	51.71E-01	1290.82	
	Total Activity :		1.109E+01	1.109E+01			
	Grand Total Activity :		1.109E+01	1.109E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 11L29586-3 Acquisition date : 16-AUG-2006 14:29:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.62	91	557	1.53	132.56	129	7	7.21E-03	89.0	6.97E-01	
0	139.79	93	383	1.03	279.39	275	9	7.41E-03	79.8	1.90E+00	
0	198.12	87	225	1.45	396.40	393	7	6.95E-03	63.6	1.75E+00	
0	294.94	64	215	1.30	590.56	587	9	5.08E-03	89.2	1.37E+00	
0	351.28	159	153	1.70	703.54	696	12	1.26E-02	36.9	1.20E+00	
0	595.78	62	54	1.20	1193.45	1188	10	4.91E-03	51.6	8.04E-01	
0	609.28	154	85	1.74	1220.49	1215	13	1.22E-02	31.2	7.90E-01	
0	1120.92	57	24	2.40	2244.26	2237	14	4.56E-03	45.1	4.86E-01	
0	1762.36	34	15	2.91	3525.02	3517	15	2.69E-03	68.0	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.069E+01	1.069E+01	6.228E+01	582.77	
TH-228	1.91Y	1.00	3.997E-01	4.006E-01	51.71E-01	1290.82	
	Total Activity :		1.109E+01	1.109E+01			
	Grand Total Activity :		1.109E+01	1.109E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.069E+01	6.228E+01	4.162E+01	0.000E+00	0.257
TH-228	4.006E-01	5.171E+00	7.865E+00	0.000E+00	0.051

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-1.010E-01	2.057E+01	3.438E+01	0.000E+00	-0.003
NA-24	-1.396E+01	2.794E+01	4.299E+01	0.000E+00	-0.325
CR-51	1.110E+01	2.062E+01	3.422E+01	0.000E+00	0.324
MN-54	1.473E+00	2.407E+00	4.140E+00	0.000E+00	0.356
CO-57	-1.389E+00	2.324E+00	3.778E+00	0.000E+00	-0.368
CO-58	-1.741E+00	2.314E+00	3.473E+00	0.000E+00	-0.501
FE-59	-2.376E+00	4.651E+00	7.377E+00	0.000E+00	-0.322
CO-60	-2.400E+00	2.215E+00	3.052E+00	0.000E+00	-0.786
ZN-65	2.027E+00	5.526E+00	8.438E+00	0.000E+00	0.240
SE-75	-1.886E+00	3.182E+00	4.994E+00	0.000E+00	-0.378
SR-85	-6.593E+00	3.188E+00	4.773E+00	0.000E+00	-1.381
Y-88	-7.264E-02	2.568E+00	4.148E+00	0.000E+00	-0.018
NB-94	5.717E-01	2.190E+00	3.678E+00	0.000E+00	0.155
NB-95	1.154E+00	2.594E+00	4.395E+00	0.000E+00	0.263
ZR-95	-1.271E-01	4.513E+00	7.360E+00	0.000E+00	-0.017
MO-99	-1.102E+01	3.140E+01	4.976E+01	0.000E+00	-0.221
RU-103	-2.525E+00	2.458E+00	3.813E+00	0.000E+00	-0.662
RU-106	-2.449E+00	2.280E+01	3.734E+01	0.000E+00	-0.066
AG-110m	-8.229E-01	2.630E+00	4.230E+00	0.000E+00	-0.195
SN-113	1.393E+00	2.922E+00	5.064E+00	0.000E+00	0.275
SB-124	1.050E+00	2.440E+00	3.678E+00	0.000E+00	0.286
SB-125	7.083E-01	7.125E+00	1.204E+01	0.000E+00	0.059
TE-129M	1.245E+01	2.786E+01	4.796E+01	0.000E+00	0.260
I-131	-9.128E-01	3.049E+00	4.781E+00	0.000E+00	-0.191
BA-133	1.481E-01	3.745E+00	5.246E+00	0.000E+00	0.028
CS-134	1.210E+00	2.354E+00	3.583E+00	0.000E+00	0.338
CS-136	-1.913E+00	2.611E+00	3.933E+00	0.000E+00	-0.486
CS-137	1.479E+00	2.923E+00	4.990E+00	0.000E+00	0.296
CE-139	-3.846E-01	2.327E+00	3.808E+00	0.000E+00	-0.101
BA-140	-3.186E+00	8.962E+00	1.450E+01	0.000E+00	-0.220
LA-140	-2.173E-01	3.263E+00	5.297E+00	0.000E+00	-0.041
CE-141	-1.555E+00	4.148E+00	6.525E+00	0.000E+00	-0.238
CE-144	-3.380E+00	1.869E+01	2.973E+01	0.000E+00	-0.114
EU-152	2.429E+00	7.796E+00	1.122E+01	0.000E+00	0.216
EU-154	1.657E+00	4.827E+00	8.121E+00	0.000E+00	0.204
RA-226	-4.592E+01	6.094E+01	9.712E+01	0.000E+00	-0.473
AC-228	-1.029E+00	1.014E+01	1.747E+01	0.000E+00	-0.059
TH-232	-1.028E+00	1.014E+01	1.746E+01	0.000E+00	-0.059
U-235	5.671E+00	1.963E+01	2.897E+01	0.000E+00	0.196
U-238	-1.282E+02	2.667E+02	4.051E+02	0.000E+00	-0.317
AM-241	1.295E+01	2.695E+01	4.616E+01	0.000E+00	0.281

```
A,11L29586-3       ,08/16/2006 17:58,08/14/2006 11:10,   3.137E+00,L29586-3 WG EX
B,11L29586-3       ,LIBD                ,08/16/2006 09:32,113L082304
C,K-40     ,YES,    1.069E+01,    6.228E+01,    4.162E+01,,     0.257
C,TH-228   ,YES,    4.006E-01,    5.171E+00,    7.865E+00,,     0.051
C,BE-7     ,NO ,   -1.010E-01,    2.057E+01,    3.438E+01,,    -0.003
C,NA-24    ,NO ,   -1.396E+01,    2.794E+01,    4.299E+01,,    -0.325
C,CR-51    ,NO ,    1.110E+01,    2.062E+01,    3.422E+01,,     0.324
C,MN-54    ,NO ,    1.473E+00,    2.407E+00,    4.140E+00,,     0.356
C,CO-57    ,NO ,   -1.389E+00,    2.324E+00,    3.778E+00,,    -0.368
C,CO-58    ,NO ,   -1.741E+00,    2.314E+00,    3.473E+00,,    -0.501
C,FE-59    ,NO ,   -2.376E+00,    4.651E+00,    7.377E+00,,    -0.322
C,CO-60    ,NO ,   -2.400E+00,    2.215E+00,    3.052E+00,,    -0.786
C,ZN-65    ,NO ,    2.027E+00,    5.526E+00,    8.438E+00,,     0.240
C,SE-75    ,NO ,   -1.886E+00,    3.182E+00,    4.994E+00,,    -0.378
C,SR-85    ,NO ,   -6.593E+00,    3.188E+00,    4.773E+00,,    -1.381
C,Y-88     ,NO ,   -7.264E-02,    2.568E+00,    4.148E+00,,    -0.018
C,NB-94    ,NO ,    5.717E-01,    2.190E+00,    3.678E+00,,     0.155
C,NB-95    ,NO ,    1.154E+00,    2.594E+00,    4.395E+00,,     0.263
C,ZR-95    ,NO ,   -1.271E-01,    4.513E+00,    7.360E+00,,    -0.017
C,MO-99    ,NO ,   -1.102E+01,    3.140E+01,    4.976E+01,,    -0.221
C,RU-103   ,NO ,   -2.525E+00,    2.458E+00,    3.813E+00,,    -0.662
C,RU-106   ,NO ,   -2.449E+00,    2.280E+01,    3.734E+01,,    -0.066
C,AG-110m  ,NO ,   -8.229E-01,    2.630E+00,    4.230E+00,,    -0.195
C,SN-113   ,NO ,    1.393E+00,    2.922E+00,    5.064E+00,,     0.275
C,SB-124   ,NO ,    1.050E+00,    2.440E+00,    3.678E+00,,     0.286
C,SB-125   ,NO ,    7.083E-01,    7.125E+00,    1.204E+01,,     0.059
C,TE-129M  ,NO ,    1.245E+01,    2.786E+01,    4.796E+01,,     0.260
C,I-131    ,NO ,   -9.128E-01,    3.049E+00,    4.781E+00,,    -0.191
C,BA-133   ,NO ,    1.481E-01,    3.745E+00,    5.246E+00,,     0.028
C,CS-134   ,NO ,    1.210E+00,    2.354E+00,    3.583E+00,,     0.338
C,CS-136   ,NO ,   -1.913E+00,    2.611E+00,    3.933E+00,,    -0.486
C,CS-137   ,NO ,    1.479E+00,    2.923E+00,    4.990E+00,,     0.296
C,CE-139   ,NO ,   -3.846E-01,    2.327E+00,    3.808E+00,,    -0.101
C,BA-140   ,NO ,   -3.186E+00,    8.962E+00,    1.450E+01,,    -0.220
C,LA-140   ,NO ,   -2.173E-01,    3.263E+00,    5.297E+00,,    -0.041
C,CE-141   ,NO ,   -1.555E+00,    4.148E+00,    6.525E+00,,    -0.238
C,CE-144   ,NO ,   -3.380E+00,    1.869E+01,    2.973E+01,,    -0.114
C,EU-152   ,NO ,    2.429E+00,    7.796E+00,    1.122E+01,,     0.216
C,EU-154   ,NO ,    1.657E+00,    4.827E+00,    8.121E+00,,     0.204
C,RA-226   ,NO ,   -4.592E+01,    6.094E+01,    9.712E+01,,    -0.473
C,AC-228   ,NO ,   -1.029E+00,    1.014E+01,    1.747E+01,,    -0.059
C,TH-232   ,NO ,   -1.028E+00,    1.014E+01,    1.746E+01,,    -0.059
C,U-235    ,NO ,    5.671E+00,    1.963E+01,    2.897E+01,,     0.196
C,U-238    ,NO ,   -1.282E+02,    2.667E+02,    4.051E+02,,    -0.317
C,AM-241   ,NO ,    1.295E+01,    2.695E+01,    4.616E+01,,     0.281
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 16-AUG-2006 17:59:46.13
TBE10 12892256 HpGe ********** Aquisition Date/Time: 16-AUG-2006 14:48:42.72

LIMS No., Customer Name, Client ID: L29586-4 WG EX/DRES

Sample ID : 10L29586-4 Smple Date: 14-AUG-2006 12:55:00.
Sample Type : WG Geometry : 103L083004
Quantity : 2.95550E+00 L BKGFILE : 10BG072806MT
Start Channel : 80 Energy Tol : 1.00000 Real Time : 0 03:10:59.34
End Channel : 4090 Pk Srch Sens: 5.00000 Live time : 0 03:10:57.19
MDA Constant : 0.00 Library Used: LIBD

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.50	130	538	1.52	132.31	7.34E-01	1.13E-02	33.5	3.75E-01
2	1	74.86*	13	450	0.79	149.05	1.03E+00	1.11E-03	296.1	3.31E+00
3	1	77.19	130	269	0.96	153.72	1.10E+00	1.14E-02	20.7	2.68E+00
4	1	140.49	114	422	0.84	280.42	1.91E+00	9.98E-03	33.7	1.47E+01
5	1	238.53*	16	176	1.17	476.69	1.54E+00	1.41E-03	144.5	2.33E+00
6	1	242.02	77	200	1.33	483.67	1.52E+00	6.68E-03	33.4	2.36E+00
7	1	295.37*	225	257	1.10	590.48	1.33E+00	1.97E-02	15.7	2.37E+00
8	1	351.93*	367	163	1.58	703.72	1.17E+00	3.20E-02	9.2	2.60E+00
9	1	596.00	46	52	1.49	1192.38	7.86E-01	4.00E-03	31.9	8.41E-01
10	1	609.30*	305	94	1.60	1219.00	7.72E-01	2.66E-02	9.2	1.61E+00
11	1	767.88	76	65	6.12	1536.53	6.46E-01	6.64E-03	27.6	6.73E+00
12	1	934.13	24	20	2.00	1869.43	5.54E-01	2.07E-03	41.1	1.14E+00
13	1	1120.18*	68	18	1.77	2242.01	4.79E-01	5.89E-03	19.8	1.55E+00
14	1	1377.40	24	30	2.25	2757.19	4.07E-01	2.07E-03	50.0	1.61E+00
15	1	1729.90	19	7	2.18	3463.28	3.44E-01	1.64E-03	34.9	7.11E-01
16	1	1764.60*	62	29	2.20	3532.78	3.39E-01	5.40E-03	25.9	8.42E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
TH-228	238.63	16	44.60*	1.539E+00	1.885E+00	1.889E+00	288.99
	240.98	------	3.95	1.529E+00	------	Line Not Found	------

Flag: "*" = Keyline

Sample ID : 10L29586-4 Acquisition date : 16-AUG-2006 14:48:42

Total number of lines in spectrum	16	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	1	6.25%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.885E+00	1.889E+00	5.459E+00	288.99	
			---	---			
Total Activity :			1.885E+00	1.889E+00			
Grand Total Activity :			1.885E+00	1.889E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : 10L29586-4 Acquisition date : 16-AUG-2006 14:48:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.50	130	538	1.52	132.31	128	9	1.13E-02	67.1	7.34E-01	
1	74.86	13	450	0.79	149.05	145	7	1.11E-03	****	1.03E+00	
1	77.19	130	269	0.96	153.72	152	5	1.14E-02	41.4	1.10E+00	
1	140.49	114	422	0.84	280.42	276	9	9.98E-03	67.5	1.91E+00	
1	242.02	77	200	1.33	483.67	481	7	6.68E-03	66.9	1.52E+00	
1	295.37	225	257	1.10	590.48	586	11	1.97E-02	31.4	1.33E+00	
1	351.93	367	163	1.58	703.72	698	13	3.20E-02	18.4	1.17E+00	
1	596.00	46	52	1.49	1192.38	1187	9	4.00E-03	63.8	7.86E-01	
1	609.30	305	94	1.60	1219.00	1213	13	2.66E-02	18.4	7.72E-01	
1	767.88	76	65	6.12	1536.53	1531	19	6.64E-03	55.3	6.46E-01	
1	934.13	24	20	2.00	1869.43	1863	10	2.07E-03	82.3	5.54E-01	
1	1120.18	68	18	1.77	2242.01	2235	14	5.89E-03	39.7	4.79E-01	
1	1377.40	24	30	2.25	2757.19	2750	12	2.07E-03	****	4.07E-01	
1	1729.90	19	7	2.18	3463.28	3458	10	1.64E-03	69.8	3.44E-01	
1	1764.60	62	29	2.20	3532.78	3524	19	5.40E-03	51.8	3.39E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	16	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	1	6.25%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.00	1.885E+00	1.889E+00	5.459E+00	288.99	
	Total Activity :		1.885E+00	1.889E+00			
	Grand Total Activity :		1.885E+00	1.889E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
TH-228	1.889E+00	5.459E+00	8.562E+00	0.000E+00	0.221

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.359E+01		2.269E+01	3.970E+01	0.000E+00	0.342
NA-24	1.041E+01		2.660E+01	4.504E+01	0.000E+00	0.231
K-40	-6.988E+00		4.413E+01	8.904E+01	0.000E+00	-0.078
CR-51	-1.648E+01		2.407E+01	3.740E+01	0.000E+00	-0.441
MN-54	-4.324E+00		2.707E+00	3.646E+00	0.000E+00	-1.186
CO-57	4.612E-01		2.738E+00	4.625E+00	0.000E+00	0.100
CO-58	-5.108E-01		2.549E+00	4.083E+00	0.000E+00	-0.125
FE-59	-7.772E-01		5.370E+00	8.473E+00	0.000E+00	-0.092
CO-60	1.234E+00		2.695E+00	4.749E+00	0.000E+00	0.260
ZN-65	2.710E+00		6.104E+00	9.146E+00	0.000E+00	0.296
SE-75	7.963E-01		3.877E+00	6.403E+00	0.000E+00	0.124
SR-85	-7.329E+00		3.343E+00	4.930E+00	0.000E+00	-1.487
Y-88	-9.546E-01		2.899E+00	4.431E+00	0.000E+00	-0.215
NB-94	1.661E+00		2.464E+00	4.311E+00	0.000E+00	0.385
NB-95	2.531E+00		3.095E+00	4.868E+00	0.000E+00	0.520
ZR-95	2.114E+00		4.420E+00	7.611E+00	0.000E+00	0.278
MO-99	-1.985E+01		3.392E+01	5.263E+01	0.000E+00	-0.377
RU-103	-9.193E-01		2.818E+00	4.628E+00	0.000E+00	-0.199
RU-106	1.343E+01		2.616E+01	4.517E+01	0.000E+00	0.297
AG-110m	-5.358E-02		2.575E+00	4.256E+00	0.000E+00	-0.013
SN-113	-5.180E-01		3.766E+00	5.994E+00	0.000E+00	-0.086
SB-124	-7.103E-02		2.816E+00	4.057E+00	0.000E+00	-0.018
SB-125	-3.497E+00		8.088E+00	1.252E+01	0.000E+00	-0.279
TE-129M	6.853E+00		3.148E+01	5.381E+01	0.000E+00	0.127
I-131	2.700E-01		3.427E+00	5.553E+00	0.000E+00	0.049
BA-133	-1.997E+00		4.226E+00	5.687E+00	0.000E+00	-0.351
CS-134	-4.202E-01		2.841E+00	4.032E+00	0.000E+00	-0.104
CS-136	9.834E-01		2.817E+00	4.775E+00	0.000E+00	0.206
CS-137	1.097E+00		2.831E+00	4.845E+00	0.000E+00	0.226
CE-139	-8.279E-01		2.777E+00	4.568E+00	0.000E+00	-0.181
BA-140	-1.424E+00		1.013E+01	1.676E+01	0.000E+00	-0.085
LA-140	-2.224E+00		3.170E+00	4.569E+00	0.000E+00	-0.487
CE-141	4.473E+00		5.100E+00	8.209E+00	0.000E+00	0.545
CE-144	-1.465E+00		2.155E+01	3.601E+01	0.000E+00	-0.041
EU-152	3.652E+00		8.814E+00	1.461E+01	0.000E+00	0.250
EU-154	-3.688E+00		5.809E+00	9.547E+00	0.000E+00	-0.386
RA-226	-2.604E+01		7.298E+01	1.206E+02	0.000E+00	-0.216
AC-228	1.028E+01		1.087E+01	1.997E+01	0.000E+00	0.515
TH-232	1.027E+01		1.086E+01	1.996E+01	0.000E+00	0.515
U-235	2.780E+01		2.352E+01	3.663E+01	0.000E+00	0.759
U-238	-1.449E+02		2.998E+02	4.561E+02	0.000E+00	-0.318
AM-241	-3.212E+00		2.451E+01	3.883E+01	0.000E+00	-0.083

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A,10L29586-4       ,08/16/2006 17:59,08/14/2006 12:55,   2.955E+00,L29586-4 WG EX
B,10L29586-4       ,LIBD                ,08/16/2006 09:41,103L083004
C,TH-228   ,YES,    1.889E+00,    5.459E+00,    8.562E+00,,     0.221
C,BE-7     ,NO ,    1.359E+01,    2.269E+01,    3.970E+01,,     0.342
C,NA-24    ,NO ,    1.041E+01,    2.660E+01,    4.504E+01,,     0.231
C,K-40     ,NO ,   -6.988E+00,    4.413E+01,    8.904E+01,,    -0.078
C,CR-51    ,NO ,   -1.648E+01,    2.407E+01,    3.740E+01,,    -0.441
C,MN-54    ,NO ,   -4.324E+00,    2.707E+00,    3.646E+00,,    -1.186
C,CO-57    ,NO ,    4.612E-01,    2.738E+00,    4.625E+00,,     0.100
C,CO-58    ,NO ,   -5.108E-01,    2.549E+00,    4.083E+00,,    -0.125
C,FE-59    ,NO ,   -7.772E-01,    5.370E+00,    8.473E+00,,    -0.092
C,CO-60    ,NO ,    1.234E+00,    2.695E+00,    4.749E+00,,     0.260
C,ZN-65    ,NO ,    2.710E+00,    6.104E+00,    9.146E+00,,     0.296
C,SE-75    ,NO ,    7.963E-01,    3.877E+00,    6.403E+00,,     0.124
C,SR-85    ,NO ,   -7.329E+00,    3.343E+00,    4.930E+00,,    -1.487
C,Y-88     ,NO ,   -9.546E-01,    2.899E+00,    4.431E+00,,    -0.215
C,NB-94    ,NO ,    1.661E+00,    2.464E+00,    4.311E+00,,     0.385
C,NB-95    ,NO ,    2.531E+00,    3.095E+00,    4.868E+00,,     0.520
C,ZR-95    ,NO ,    2.114E+00,    4.420E+00,    7.611E+00,,     0.278
C,MO-99    ,NO ,   -1.985E+01,    3.392E+01,    5.263E+01,,    -0.377
C,RU-103   ,NO ,   -9.193E-01,    2.818E+00,    4.628E+00,,    -0.199
C,RU-106   ,NO ,    1.343E+01,    2.616E+01,    4.517E+01,,     0.297
C,AG-110m  ,NO ,   -5.358E-02,    2.575E+00,    4.256E+00,,    -0.013
C,SN-113   ,NO ,   -5.180E-01,    3.766E+00,    5.994E+00,,    -0.086
C,SB-124   ,NO ,   -7.103E-02,    2.816E+00,    4.057E+00,,    -0.018
C,SB-125   ,NO ,   -3.497E+00,    8.088E+00,    1.252E+01,,    -0.279
C,TE-129M  ,NO ,    6.853E+00,    3.148E+01,    5.381E+01,,     0.127
C,I-131    ,NO ,    2.700E-01,    3.427E+00,    5.553E+00,,     0.049
C,BA-133   ,NO ,   -1.997E+00,    4.226E+00,    5.687E+00,,    -0.351
C,CS-134   ,NO ,   -4.202E-01,    2.841E+00,    4.032E+00,,    -0.104
C,CS-136   ,NO ,    9.834E-01,    2.817E+00,    4.775E+00,,     0.206
C,CS-137   ,NO ,    1.097E+00,    2.831E+00,    4.845E+00,,     0.226
C,CE-139   ,NO ,   -8.279E-01,    2.777E+00,    4.568E+00,,    -0.181
C,BA-140   ,NO ,   -1.424E+00,    1.013E+01,    1.676E+01,,    -0.085
C,LA-140   ,NO ,   -2.224E+00,    3.170E+00,    4.569E+00,,    -0.487
C,CE-141   ,NO ,    4.473E+00,    5.100E+00,    8.209E+00,,     0.545
C,CE-144   ,NO ,   -1.465E+00,    2.155E+01,    3.601E+01,,    -0.041
C,EU-152   ,NO ,    3.652E+00,    8.814E+00,    1.461E+01,,     0.250
C,EU-154   ,NO ,   -3.688E+00,    5.809E+00,    9.547E+00,,    -0.386
C,RA-226   ,NO ,   -2.604E+01,    7.298E+01,    1.206E+02,,    -0.216
C,AC-228   ,NO ,    1.028E+01,    1.087E+01,    1.997E+01,,     0.515
C,TH-232   ,NO ,    1.027E+01,    1.086E+01,    1.996E+01,,     0.515
C,U-235    ,NO ,    2.780E+01,    2.352E+01,    3.663E+01,,     0.759
C,U-238    ,NO ,   -1.449E+02,    2.998E+02,    4.561E+02,,    -0.318
C,AM-241   ,NO ,   -3.212E+00,    2.451E+01,    3.883E+01,,    -0.083
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APPENDIX E

DATA VALIDATION MEMORANDUM

CONESTOGA-ROVERS & ASSOCIATES

45 Farmington Valley Drive
Plainville, Connecticut 06062
Telephone: (860) 747-1800 Fax: (860) 747-1900
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MEMORANDUM

TO: Steve Quigley

FROM: Kathy Shaw/ks/7/CT

REF. NO.: 45136-23

DATE: June 29, 2006

Revision Date: August 29, 2006

RE: Data Quality Assessment and Verification
Fleetwide Assessment - Hydrogeologic Investigation
Dresden Generating Station – Morris, Illinois

This memorandum details a data verification of the radiochemical data resulting from the collection of 67 groundwater, six (6) surface water and nine (9) quality control samples from the Dresden Generating Station in Morris, Illinois. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Teledyne Brown Engineering in Knoxville, Tennessee (TBE) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.[1]

Sample Quantitation

The laboratory reported several radionuclides with activity concentrations above the minimum detectable concentration (MDC) and greater than the three (3) sigma critical level (99% confidence interval), but qualified them as not detected due to the presence of interference preventing identification of the major peaks, with a U* flag. Based on the laboratory qualification definition these concentrations should be qualified as not-detected (U*) above the laboratory reported MDC.

Sample Preservation

Samples collected for gamma scan and total strontium analyses are to be preserved to a pH of less than or equal to two (2) during shipment and laboratory storage with nitric acid at the time of collection. The samples were shipped and maintained in accordance with the sample preservation requirements.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free of radioactive material contamination produced by the laboratory conditions or procedures.

[1] PRESCRIBED PROCEDURE FOR MEASUREMENT OF RADIOACTIVITY IN DRINKING WATER EPA-600/4-80-032

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY ISO 9001 ENGINEERING DESIGN

Laboratory Control Sample Analysis

The laboratory control sample (LCS) is a sample containing a known amount of a radionuclide that is equivalent to internal or external control samples prepared by the analytical laboratory or a Federal/State agency. The LCS percent recoveries were within the laboratory or agency control limits, indicating that an acceptable level of overall performance was achieved.

Duplicate Sample Analyses

The laboratory precision of matrix-specific measurement system was monitored by the analyses of duplicate samples. The duplicate relative percent difference (RPD) data were within the acceptance criteria. No targeted analytes were reported as detected in the laboratory duplicate sample sets.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of one (1) field blank (rinsate) sample and eight (8) field duplicate sample sets.

To assess the efficiency of field decontamination procedures and cleanliness of sample containers, the rinsate sample identified in Table 1 was collected and analyzed. No target radionuclides were reported as detected in the rinsate samples.

Overall precision for the sampling event and laboratory procedures were monitored using the results of the field duplicate sample sets. Table 3 summarizes the results of the detected analytes in the field duplicate sample set. The data indicate that an adequate level of precision was achieved for the sampling event.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Matrix*	*Analysis*
DSP-152	WG-DN-DSP-152-052306-JH-001		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-157M	WG-DN-DSP-157M-052306-JH-002		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-157S	WG-DN-DSP-157S-052306-JH-003		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-126	WG-DN-DSP-126-052406-JH-004		5/24/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-153	WG-DN-DSP-153-052406-JH-005		5/24/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-154	WG-DN-DSP-154-052506-JH-006		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-158M	WG-DN-DSP-158M-052506-JH-007		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-158S	WG-DN-DSP-158S-052506-JH-008		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-159M	WG-DN-DSP-159M-052506-JH-009		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-010		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-103S	WG-DN-MW-DN-103S-052606-JH-011	Duplicate (010)	5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-103I	WG-DN-MW-DN-103I-052606-JH-012		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-106S	WG-DN-MW-DN-106S-052606-JH-013		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-121	WG-DN-DSP-121-052606-JH-014		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-117	WG-DN-DSP-117-052606-JH-015		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-147	WG-DN-DSP-147-053006-JH-016		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-148	WG-DN-DSP-148-053006-JH-017		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-156	WG-DN-DSP-156-053006-JH-018		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-149R	WG-DN-DSP-149R-053106-JH-019		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-149R	WG-DN-DSP-149R-053106-JH-020	Duplicate (019)	5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-159S	WG-DN-DSP-159S-053106-JH-022		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-105	WG-DN-DSP-DN-105-052306-JL-051		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-106	WG-DN-DSP-DN-106-052306-JL-052		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-107	WG-DN-DSP-DN-107-052306-JL-053		5/23/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-150	WG-DN-DSP-DN-150-052406-JL-054		5/24/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-151	WG-DN-DSP-DN-151-052406-JL-055		5/24/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-108	WG-DN-DSP-DN-108-052406-JL-056		5/24/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-118	WG-DN-DSP-DN-118-052506-JL-057		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-155	WG-DN-DSP-DN-155-052506-JL-058		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-122	WG-DN-DSP-DN-122-052506-JL-059		5/25/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-123	WG-DN-DSP-DN-123-052606-JL-060		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-123	WG-DN-DSP-DN-123-052606-JL-061	Duplicate (060)	5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-124	WG-DN-DSP-DN-124-052606-JL-062		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-101S	WG-DN-MW-DN-101S-052606-JL-063		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-101I	WG-DN-MW-DN-101I-052606-JL-064		5/26/2006	Groundwater	Tritium/Strontium/Gamma Spectrum

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Matrix*	*Analysis*
MW-DN-108I	WG-DN-MW-DN-108I-052606-JL-065		5/26/2006	Groundwater	Tritium/Strontium/Sr-90/Gamma Spectrum
DSP-127	WG-DN-DSP-DN-127-053006-JL-066		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-110S	WG-DN-MW-DN-110S-053006-JL-067		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-110I	WG-DN-MW-DN-110I-053006-JL-068		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-104S	WG-DN-MW-DN-104S-053006-JL-069		5/30/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-070		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-109I	WG-DN-MW-DN-109I-053106-JL-071	Duplicate (070)	5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-109S	WG-DN-MW-DN-109S-053106-JL-072		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-111S	WG-DN-MW-DN-111S-053106-JL-073		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-107S	WG-DN-MW-DN-107S-053106-JL-074		5/31/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-102I	WG-DN-MW-DN-102I-060106-JL-075		6/1/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-102S	WG-DN-MW-DN-102S-060106-JL-076		6/1/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-105S	WG-DN-MW-DN-105S-060106-JL-077		6/1/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
DSP-125	WG-DN-DSP-DN-125-060106-JL-078		6/1/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
SW-DN-103	WS-DN-SW-103-053106-JH-021		5/31/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-101	WS-DN-SW-101-053106-JH-023		5/31/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-102	WS-DN-SW-102-053106-JH-024		5/31/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-105	WS-DN-SW-105-060106-JH-025		6/1/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-104	WS-DN-SW-104-060106-JH-026		6/1/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-106	WS-DN-SW-106-060106-JH-027		6/1/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-DN-106	WS-DN-SW-106-060106-JH-028	Duplicate (027)	6/1/2006	Surface Water	Tritium/Strontium/Gamma Spectrum
MW-DN-122I	WG-DN-MW-DN-122I-080806-GL-001		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-122S	WG-DN-MW-DN-122S-080806-GL-002		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-121S	WG-DN-MW-DN-121S-080806-GL-003		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-123I	WG-DN-MW-DN-123I-080806-GL-004		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
--	RB-DN-MW-DN-120I-080806-GL-005	Rinsate	8/8/2006	Water	Tritium/Strontium/Gamma Spectrum
MW-DN-120I	WG-DN-MW-DN-120I-080806-GL-006		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-120S	WG-DN-MW-DN-120S-080806-GL-007		8/8/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-123S	WG-DN-MW-DN-123S-080806-GL-026		8/8/2006	Groundwater	Tritium
MW-DN-113S	WG-DN-MW-DN-113S-080906-GL-008		8/9/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-009		8/9/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-113I	WG-DN-MW-DN-113I-080906-GL-010	Duplicate (009)	8/9/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-116I	WG-DN-MW-DN-116I-080906-GL-011		8/9/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-116S	WG-DN-MW-DN-116S-080906-GL-012		8/9/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-112S	WG-DN-MW-DN-112S-081006-GL-013		8/10/2006	Groundwater	Tritium/Strontium/Gamma Spectrum

SAMPLE KEY
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Matrix*	*Analysis*
MW-DN-112I	WG-DN-MW-DN-112I-081006-GL-014		8/10/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-117I	WG-DN-MW-DN-117I-081006-GL-015		8/10/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-118S	WG-DN-MW-DN-118S-081006-GL-016		8/10/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-119S	WG-DN-MW-DN-119S-081106-GL-017		8/11/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-119I	WG-DN-MW-DN-119I-081106-GL-018		8/11/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-115I	WG-DN-MW-DN-115I-081106-GL-019		8/11/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-020		8/11/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-114S	WG-DN-MW-DN-114S-081106-GL-021	Duplicate(020)	8/11/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-022		8/14/2006	Groundwater	Tritium/Strontium/Sr-90/Gamma Spectrum
MW-DN-108I	WG-DN-MW-DN-108I-081406-GL-023	Duplicate (022)	8/14/2006	Groundwater	Tritium/Strontium/Sr-90/Gamma Spectrum
MW-DN-115S	WG-DN-MW-DN-115S-081406-GL-024		8/14/2006	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-DN-114I	WG-DN-MW-DN-114I-081406-GL-025		8/14/2006	Groundwater	Tritium/Strontium/Gamma Spectrum

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QC - Quality Control
Gamma Spectrum - Barium-140, Cesium-134, Cesium-137, Cobalt-58, Cobalt-60, Iron-59, Lanthanum-140, Manganese-54, Niobium-95, Zinc-65, Zirconium-95
Sr-90 - Strontium-90
Isotopes not listed in Table 1, but typically detected in environmental samples (i.e. Ac-228, K-40, Be-7, Ra-226, Th-228, Th-232, etc.) were reported if detected.

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Parameter	*Method* [1]	*Matrix*	*Holding Time*	*Preservation*
Tritium	EPA 906.0	Water	- 6 months	None
Strontium - 89/90 (Total)	EPA 905.0	Water	- 6 months	HNO3 to pH<2
Strontium - 90	EPA 905.0	Water	- 6 months	HNO3 to pH<2
Gamma Spectrum	EPA 901.1	Water	- 6 months	HNO3 to pH<2

[1] EPA-60/40-80-032 August 1980 "Precribed Procedures For Measurement of Radioactivity In Drinking Water

TABLE 3

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FLEETWIDE ASSESSMENT
DRESDEN GENERATING STATION
MORRIS, ILLINOIS

Parameter	*Original Sample ID*	*Original Result*	*Uncertainty @ 2 sigma*	*Duplicate Sample ID*	*Duplicate Result*	*Uncertainty @ 2 sigma*	*RPD*	*Units*
Tritium	WG-DN-DSP-DN-123-052606-JL-060	13100	+/- 318	WG-DN-DSP-DN-123-052606-JL-061	13200	+/- 319	0.76	pCi/L
Tritium	WG-DN-DSP-149R-053106-JH-019	668	+/- 144	WG-DN-DSP-149R-053106-JH-020	694	+/- 143	3.8	pCi/L
Tritium	WG-DN-MW-DN-109I-053106-JL-070	3620	+/- 413	WG-DN-MW-DN-109I-053106-JL-071	3750	+/- 424	3.5	pCi/L
Tritium	WG-DN-MW-DN-114S-081106-GL-020	2770	+/- 336	WG-DN-MW-DN-114S-081106-GL-021	2740	+/- 335	1.1	pCi/L
Strontium-89/90 (Total)	WG-DN-MW-DN-108I-081406-GL-022	3.21	+/- 1	WG-DN-MW-DN-108I-081406-GL-023	2.72	+/- 1.01	16.5	pCi/L
Strontium-90		4.74	+/- 2.45		2.17	+/- 0.783	74.4	pCi/L

RPD - Relative Percent Difference